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OFFICIAL YEAR BOOK OF THE COMMONWEALTH OF AUSTRALIA. III

Australia.

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS,
MELBOURNE.

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OFFICIAL

YEAR BOOK

OF THE

COMMONWEALTH OF AUSTRALIA

No. 19.—1926.

Prepared under Instructions from
The Minister of State for Home and Territories,

BY

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Editor: JOHN STONHAM, M.A.

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PREFACE.

By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered "to make laws for the peace, order, and good government of the Commonwealth, with respect to Census and Statistics." In the exercise of the power so conferred, a "Census and Statistics Act" was passed in 1905, and in the year following the "Commonwealth Bureau of Census and Statistics" was created. The first Official Year Book was published early in 1908. The publication here presented is the nineteenth Official Year Book issued under the authority of the Commonwealth Government.

The synopsis on pp. VII. to XXII. immediately following shows the general arrangement of the work. In addition to the ordinary Chapters, each issue contains special articles dealing with some particular subject or subjects of more or less permanent interest. These cannot of course be repeated year after year, but in some instances a brief condensation is given in subsequent issues. While portion of the matter contained in Year Books Nos. 1 to 18 has been reduced to synopses or deleted in the present issue, the special index provided at the end of the volume will assist in tracing it in previous issues.

The present issue contains a specially-contributed article, dealing with "Forestry in Australia," placed at the end of Chapter XIX., "Forestry."

Amongst the new matter contained in the various Chapters, mention may be made of the sub-section dealing with the Pacific Islanders in Australia, which appears at the close of Chapter XXIV., "Population," and the sub-section dealing with Australian Life Tables, incorporated at the end of Chapter XXV., "Vital Statistics."

The full text of the Commonwealth Constitution Act and Amendments appears on pages 17 to 34.

Recent information or returns which have come to hand since the various Chapters were sent to press will be found in the Appendix, p. 997.

The material contained in each issue is always carefully examined, but it would be idle to hope that all error has been avoided. The Commonwealth Statistician desires to express appreciation of the opportunity afforded him of improving the Year Book, by those who have been kind enough to point out defects or make suggestions.

My best thanks are due to the State Statisticians, to the responsible officers of the various Commonwealth and State Departments, and to others, who have kindly, and often at considerable trouble, supplied information for this issue.

In conclusion, I wish to express my keen appreciation of the valuable work performed by Mr. Stonham, the editor of the Year Book, and also of the services rendered by the officers in charge of the various branches of the Commonwealth Bureau of Census and Statistics, upon whom has devolved the duty of revising, or in some cases of re-writing the Chapters relative to their respective branches.

CHAS. H. WICKENS,
Commonwealth Statistician and Actuary.

Commonwealth Bureau of Census and Statistics,
Melbourne, October 26, 1926.

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MAY 9 1927

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STATISTICAL SUMMARY.

STATISTICAL SUMMARY, AUSTRALIA, 1871 TO 1925.

Heading.		Years.						
		1871.	1881.	1891.	1901.	1911.	1921.	1925.
Population ..	Males	928,918	1,247,059	1,736,617	2,004,836	2,382,232	2,798,727	3,060,315
	Females	771,970	1,059,677	1,504,368	1,820,077	2,191,554	2,710,346	2,931,769
	Total	1,700,888	2,306,736	3,240,985	3,824,913	4,573,786	5,509,073	5,992,084
Births ..	No.	63,625	80,004	110,187	102,945	122,193	136,198	135,792
	Rate	38.00	35.26	34.47	27.16	27.21	24.95	22.89
Deaths ..	No.	22.175	33,327	47,430	46,330	47,869	54,076	54,568
	Rate	13.24	14.69	14.84	12.22	10.66	9.91	9.20
Marriages ..	No.	11,623	17,244	23,862	27,753	39,482	46,869	46,899
	Rate	6.94	7.60	7.47	7.32	8.79	8.59	7.91
Agriculture—								
Wheat ..	Area, acs.	1,279,778	3,002,064	3,335,528	5,115,965	7,427,834	9,719,042	10,175,194
	Yld., bshl.	11,917,741	21,443,862	25,675,265	38,561,619	71,636,347	129,088,806	113,443,304
	Av. ,,	9.31	7.14	7.70	7.54	9.64	13.28	11.15
Oats ..	Area, acs.	225,492	194,816	246,129	461,430	616,794	733,406 (e)	1,165,127
	Yld., bshl.	4,251,630	4,795,897	5,726,256	9,789,854	9,561,833	12,147,433 (e)	19,393,737
	Av. ,,	18.85	24.62	23.27	21.22	15.50	16.56 (e)	16.65
Barley ..	Area, acs.	48,164	75,864	68,068	74,511	116,466	298,910 (e)	260,248
	Yld., bshl.	726,158	1,353,380	1,178,560	1,519,819	2,056,836	6,085,685 (e)	5,066,231
	Av. ,,	15.08	17.84	17.31	20.40	17.66	20.36 (e)	19.47
Maize ..	Area, acs.	142,078	165,777	284,428	294,849	340,065	305,186 (e)	398,949
	Yld., bshl.	4,576,635	5,726,266	9,261,922	7,034,786	8,939,855	7,840,438 (e)	12,432,037
	Av. ,,	32.21	34.54	32.56	23.86	26.29	25.69 (e)	31.16
Hay ..	Area, acs.	303,274	768,388	942,166	1,688,402	2,518,351	2,994,519 (e)	3,026,405
	Yld., tons	375,871	767,194	1,067,255	2,024,608	2,867,973	3,902,189 (e)	4,068,419
	Av. ,,	1.24	1.00	1.13	1.20	1.14	1.30 (e)	1.34
Potatoes(*a*)	Area, acs.	67,911	76,265	112,884	109,685	130,463	149,144 (e)	138,776
	Yld., tons	212,896	243,216	380,477	322,524	301,489	388,091 (e)	332,125
	Av. ,,	3.13	3.19	3.37	2.94	2.31	2.60 (e)	2.39
Sugar Cane(*d*)	Area, acs.	11,576	19,708	45,444	86,950	101,010	128,356 (e)	175,410
	Yld., tons	176,632	349,627	737,573	1,367,802	1,682,250	2,436,890 (e)	3,400,319
	Av. ,,	15.25	17.74	16.23	15.73	16.65	18.99 (e)	19.38
Vineyards ..	Area, acs.	16,253	14,570	48,882	63,677	60,602	92,114 (e)	114,394
	Wine, gal.	2,104,000	1,488,000	3,535,000	5,816,087	4,975,147	8,562,573 (e)	13,299,290
Total value all agricultural production	£	8,941,000	15,519,000	16,480,000	23,835,000	38,774,000	81,889,700 (e)	107,096,000
Pastoral, dairying, etc.—								
Live Stock	Sheep No.	40,072,955	65,092,719	106,421,068	72,040,211	93,003,521	82,226,470 (*f*)	93,154,953
	Cattle ,,	4,277,228	8,010,991	11,112,112	8,491,428	11,828,954	14,441,309 (*f*)	13,309,473
	Horses ,,	701,530	1,088,029	1,584,737	1,620,420	2,278,226	2,438,182 (*f*)	2,292,050
	Pigs ,,	586,017	703,188	845,888	931,309	1,110,721	960,385 (*f*)	980,009
Wool prod., lb. greasy		179,000,000	332,759,000	631,587,000	543,131,661	721,298,288	631,514,435 (e)	729,242,550
Butter production	lbs.	(*c*)	(*c*)	47,433,564	101,671,066	211,573,745	267,071,340 (*f*)	313,952,291
Cheese ,,	,,	(*c*)	(*c*)	19,146,929	11,575,692	15,886,712	32,653,003 (*f*)	31,442,292
Bacon and ham	,,	(*c*)	(*c*)	(*c*)	34,020,629	53,264,652	58,614,459 (*f*)	69,311,800
Total estimated value of pastoral and dairying production	£	20,736,000	29,538,000	39,256,000	36,890,000	69,832,000	113,671,000 (*f*)	167,081,000
Mineral production—								
Gold ..	£	7,916,627	5,194,390	5,281,309	14,017,508	10,551,624	4,018,685	2,375,279
Silver and lead	£	36,528	45,622	3,736,352	2,367,687	3,022,117	1,539,992	5,982,144
Copper ..	£	830,242	714,003	367,373	2,215,431	2,564,278	803,957	774,842
Tin.. ..	£	24,020	1,145,889	560,502	448,234	1,209,973	418,418	752,909
Zinc ..	£	369	200	2,979	4,067	1,415,169	283,455	1,135,057
Coal ..	£	330,759	637,865	1,914,026	2,602,770	3,929,673	11,014,831	11,541,479
Total value all mineral production ..	£	9,190,330	7,820,290	12,108,759	21,922,665	23,494,324	19,977,384	24,593,074
Forestry production—								
Quantity of local timber sawn or hewn	1,000 sup.ft.	(*c*)	(*c*)	(*c*)	452,131	604,794	590,495 (*f*)	664,550
Manufactories—								
No. of factories ..		(*b*)	(*b*)	(*b*)	(*b*)	14,455	18,023 (*f*)	20,795
Hands employed	No.					311,710	395,425 (*f*)	439,949
Wages paid ..	£					27,528,371	68,050,861 (*f*)	81,360,021
Total value of output	£					133,022,090	320,331,765 (*f*)	380,843,986
Value added in process of manufacture	£					51,259,004	121,674,119 (*f*)	147,136,758

(*a*) Partly estimated 1871 and 1881. (*b*) Owing to variation in classification and lack of information effective comparison is impossible. (*c*) Information not available. (*d*) Area of productive cane. (*e*) 1924 figures. (*f*) 1924–25 figures.

STATISTICAL SUMMARY.—AUSTRALIA, 1871 TO 1925—*continued.*

Heading.	Years.						
	1871.	1881.	1891.	1901.	1911.	1921.	1925.
Shipping—							
Oversea vessels ent. & cleared No.	2,748	3,284	3,778	4,028	4,174	3,674	3,449
Oversea vessels ent. & cleared ton.	1,312,642	2,549,364	4,726,307	6,541,991	9,984,801	9,503,018	11,200,519
Commerce (*c*)—							
Imports oversea £	17,017,000	29,067,000	37,711,000	42,434,000	66,967,488	103,066,436	151,557,598
,, per head £	10/3/3	12/16/2	11/16/0	11/3/11	14/18/2	18/14/1	25/5/10
Exports oversea £	21,725,000	27,528,000	36,043,000	49,696,000	79,482,258	127,846,535	148,419,047
,, per head £	12/19/6	12/2/8	11/5/6	13/2/2	17/13/10	23/4/1	24/15/5
Total oversea trade £	38,742,000	56,595,000	73,754,000	92,130,000	146,449,746	230,912,971	299,976,645
,, per head £	23/2/9	24/18/10	23/1/6	24/6/1	32/12/0	41/18/2	50/1/3
Customs and excise duties .. £	(*e*)	4,809,326	7,440,869	8,656,530	13,515,005	27,565,199	39,198,878
,, per head, £	(*e*)	2/2/5	2/6/7	2/5/8	2/19/2	5/0/1	6/10/10
Principal Oversea Exports (*a*)—							
Wool (lbs. greasy)	176,635,800	328,369,200	619,259,800	518,018,100	720,364,900	927,833,700	881,001,751
Wool £	9,459,629	13,173,026	19,940,029	15,237,454	26,071,193	47,977,044	63,202,415
Wheat centals	479,954	3,218,792	5,876,875	12,156,035	33,088,704	59,968,334	32,536,637
Wheat £	193,732	1,189,762	1,938,864	2,774,643	9,641,608	28,644,155	17,187,388
Flour tons	12,988	49,549	33,363	96,814	175,891	359,734	501,032
Flour £	170,415	519,635	328,423	589,604	1,391,529	5,519,881	6,839,361
Butter lbs.	1,812,700	1,298,800	4,239,500	34,607,400	101,722,100	127,347,400	97,899,744
Butter £	45,813	39,383	206,868	1,451,168	4,637,362	7,968,078	7,006,830
Skins and hides £	100,123	316,878	873,695	1,250,938	3,227,236	3,136,810	8,275,467
Tallow .. £	914,278	644,149	571,069	677,745	1,935,836	1,441,795	1,609,333
Meats .. £	566,780	362,965	460,894	2,611,244	4,303,159	5,542,102	7,345,232
Timber (undressed) £	42,586	118,117	38,448	731,301	1,023,960	1,158,166	1,333,270
Gold .. £	7,184,833	6,445,365	5,703,532	14,315,741	12,045,766	3,483,239	4,318,072
Silver and lead £	37,891	57,954	1,932,278	2,250,253	3,212,584	2,697,130	6,397,100
Copper £	598,538	676,515	417,687	1,619,145	2,345,961	705,358	281,891
Coal .. £	134,355	361,081	645,972	986,957	900,622	1,099.899	881,679
Govt. Railways—							
Lgth. of line open, mls.	970	3,832	9,541	12,579	16,078	23,296	24,844
Capital cost £	19,269,786	42,741,350	99,764,090	123,223,779	152,194,603	237,479,693	276, 114.845
Gross revenue £	1,102,650	3,910,122	8,654,085	11,038,468	17,847,837	35,936,900	44,967,464
Working expenses £	608,332	2,141,735	5,630,182	7,133,617	10,945,727	29,969,954	33,114,083
Per cent. of work'g expenses on earnings %	55.17	54.77	65.06	64.63	61.33	83.39	73.64
Postal—							
Letters and postcards dealt with No.	24,382,000	67,640,000	157,297,000	220,853,000	453,063,000	569,343,456	692,043,200
,, per head ,,	14.54	29.61	49.07	58.26	100.90	104.36	126.72
Newspapers dealt with No.	3,336,000	38,063,000	85,280,000	102,727,000	141,638,000	130,882,425	173,147,500
,, per head ,,	7.95	16.66	26.61	27.10	31.54	24.18	29.20
Cheque-paying Banks—							
Note circulation £	2,456,487	3,978,711	4,417,269	3,406,175	876,428*b*	211,187	202,875
Coin & bullion held £	6,168,869	9,108,243	16,712,923	19,737,572	30,024,225	22,092,371	31,730, 324
Advances £	26,039,573	57,732,824	129,741,583	89,167,499	116,769,133	233,214,626	209,401,240
Deposits £	21,856,959	53,849,455	98,345,338	90,965,530	147,103,081	273,866,737	321,594,080
Savings Banks							
Number of accounts open ..	100,713	250,070	614,741	964,553	1,600,112	3,327,456	3,992,201
Total deposits £	3,193,285	7,854,480	15,536,592	30,882,645	59,393,682	154,396,051	183,035,774
Aver. per account £	31/14/2	31/8/2	25/5/6	32/0/4	37/2/4	46/8/0	45/16/11
,, ,, head of population £	1/18/9	3/10/5	4/18/7	8/3/0	13/8/5	28/0/4	30/17/5
State Schools—							
Number of Schools ..	2,502	4,494	6,231	7,012	8,060	9,445	(*d*) 10,218
Teachers .. No.	4,641	9,028	12,564	14,500	16,971	26,120	(*d*) 27,424
Enrolment ,,	236,710	432,320	561,153	638,478	638,850	819,042	(*d*) 861,256
Aver. attendance ,,	137,767	255,143	350,773	450,246	463,799	666,498	(*d*) 705,990

(*a*) Australian produce, except gold, which includes re-exports. Preliminary figures for 1925-26. (*b*) Decrease due to prohibition of re-issue. (*c*) Figures for Commerce for years 1921 and 1925 relate to year ended 30th June following. (*d*) 1924 figures. (*e*) Not available.

CHRONOLOGICAL TABLE.

CHRONOLOGICAL TABLE OF CHIEF EVENTS SINCE THE ESTABLISHMENT OF SETTLEMENT IN AUSTRALIA.

Note.—The Government was centralized in Sydney, New South Wales, up to 1825, when Tasmania (Van Diemen's Land) was made a separate colony. In the Table, the names now borne by the States serve to indicate the localities.

Year.

1788 N.S.W.—Arrival of "First Fleet" at Botany Bay. Land in vicinity being found unsuitable for settlement, the expedition moved to Sydney Cove (now Port Jackson). Formal possession of Port Jackson taken by Captain Phillip on 26th January. Formal proclamation of colony on 7th February. Branch settlement established at Norfolk Island. French navigator Lapérouse visited Botany Bay. First cultivation of wheat and barley. First grape vines planted.

1789 N.S.W.—First wheat harvest at Parramatta, near Sydney. Discovery of Hawkesbury River. Outbreak of small-pox amongst aborigines.

1790 N.S.W.—"Second Fleet" reached Port Jackson. Landing of the New South Wales Corps. Severe suffering through lack of provisions. First circumnavigation of Australia by Lieut. Ball.

1791 N.S.W.—Arrival of "Third Fleet." Territorial seal brought by Governor King.

1792 N.S.W.—Visit of *Philadelphia*, first foreign trading vessel.

1793 N.S.W.—First free immigrants arrived in the *Bellona*. First Australian church opened at Sydney. Tas.—D'Entrecasteaux discovered the Derwent River.

1794 N.S.W.—Establishment of settlement at Hawkesbury River.

1795 N.S.W.—Erection of the first printing press at Sydney. Descendants of strayed cattle discovered at Cowpastures, Nepean River.

1796 N.S.W.—First Australian theatre opened at Sydney. Coal discovered by fishermen at Newcastle.

1797 N.S.W.—Introduction of merino sheep from Cape of Good Hope.

1798 Tas.—Insularity of Tasmania proved by voyage of Bass and Flinders.

1800 N.S.W.—First export of coal. First Customs House in Australia established at Sydney. Flinders' charts published.

1801 N.S.W.—First colonial manufacture of blankets and linen.

1802 Vic.—Discovery of Port Phillip by Lieut. Murray. S.A.—Discovery of Spencer's and St. Vincent Gulfs by Flinders. Q'land.—Discovery of Port Curtis and Port Bowen by Flinders.

1803 N.S.W.—First Australian wool taken to England by Capt. Macarthur. Issue of "The Sydney Gazette," first Australian newspaper. Vic.—Attempted settlement at Port Phillip by Collins. Discovery of Yarra by Grimes. Tas.—First settlement formed at Risdon by Lieut. Bowen.

1804 N.S.W.—Insurrection of convicts at Castle Hill. Vic.—Abandonment of settlement at Port Phillip. Tas.—Foundation of settlement at Hobart by Collins, and at Yorktown by Colonel Paterson.

1805 N.S.W.—First extensive sheep farm established at Camden by Capt. Macarthur. Portion of convicts from Norfolk Island transferred to Tasmania.

1806 N.S.W.—Shortage of provisions. Tas.—Settlement at Launceston.

1807 N.S.W.—Final shipment of convicts from Norfolk Island. First shipment of merchantable wool (245 lbs.) to England.

1808 N.S.W.—Deposition of Governor Bligh.

1809 N.S.W.—Isaac Nichols appointed to supervise delivery of overseas letters.

1810 N.S.W.—Post-office officially established at Sydney, Isaac Nichols first postmaster. First race meeting in Australia at Hyde Park, Sydney. Tas.—First Tasmanian newspaper printed.

1813 N.S.W.—Passage across Blue Mountains discovered by Wentworth, Lawson, and Blaxland. Macquarie River discovered by Evans.

1814 N.S.W.—Australia, previously known as "New Holland," received present name on recommendation of Flinders. Creation of Civil Courts.

Year.

1815 N.S.W.—First steam engine in Australia erected at Sydney. Lachlan River discovered by Evans. Tas.—Arrival of first immigrant ship with free settlers. First export of wheat to Sydney.

1816 N.S.W.—Botanic Garden formed at Sydney.

1817 N.S.W.—Oxley's first exploration inland. Discovery of Lakes George and Bathurst and the Goulburn Plains by Meehan and Hume. First bank in Australia opened at Sydney.

1818 N.S.W.—Cessation of free immigration. Liverpool Plains, and the Peel, Hastings, and Manning Rivers discovered by Oxley, and Port Essington by Captain King.

1819 N.S.W.—First Australian Savings Bank opened at Sydney.

1820 Tas.—First importation of pure merino sheep.

1821 Tas.—Establishment of penal settlement at Macquarie Harbour.

1823 N.S.W.—First Australian Constitution. Discovery of gold at Fish River by Assistant-Surveyor McBrien. Qld.—Brisbane River discovered by Oxley.

1824 N.S.W.—Erection into Crown Colony. Executive Council formed. Establishment of Supreme Court at Sydney, and introduction of trial by jury. First Australian Enactment (Currency Bill) passed by the Parliament at Sydney. Proclamation of freedom of the press. First manufacture of sugar. Vic.—Hume and Hovell, journeying overland from Sydney, arrived at Corio Bay. Qld.—Penal settlement founded at Moreton Bay (Brisbane). Fort Dundas Settlement formed at Melville Island, N. Terr.

1825 N.S.W.—Extension of western boundary to 129th meridian. Tas.—Separation of Van Diemen's Land (Tasmania). Qld.—Major Lockyer explored Brisbane River to its source, and discovered coal.

1826 N.S.W.—Settlement in Illawarra District. Vic.—Settlement at Corinella, Western Port, formed by Captain Wright. W.A.—Military Settlement founded at King George's Sound by Major Lockyer.

1827 N.S.W.—Colony became self-supporting. Feverish speculation in land and stock. Qld.—Darling Downs and the Condamine River discovered by Allan Cunningham.

1828 N.S.W.—Second constitution. First Census. Sturt's expedition down Darling River. Cotton first grown in Sydney Botanical Gardens. Gas first used at Sydney. Richmond and Clarence Rivers discovered by Captain Rous. Vic.—Abandonment of settlement at Western Port. Qld.—Cunningham discovered a route from Brisbane to the Darling Downs, and explored Brisbane River.

1829 N.S.W.—Sturt's expedition down Murrumbidgee River. W.A.—Foundation of settlement at Swan River. Foundation of Perth.

1830 N.S.W.—Insurrection of convicts at Bathurst. Sturt, voyaging down Murrumbidgee and Murray Rivers, arrived at Lake Alexandrina. Tas.—Trouble with natives. Black line organized to force aborigines into Tasman's Peninsula, but failed. Between 1830 and 1835, however, George Robinson, by friendly suasion, succeeded in gathering the small remnant of aborigines (203) into settlement on Flinders Island.

1831 N.S.W.—Crown lands first disposed of by public competition. Mitchell's explorations north of Liverpool Plains. Arrival at Sydney of first steamer, *Sophia Jane*, from England. S.S. *Surprise*, first steamship built in Australia, launched at Sydney. First coal shipped from Australian Agricultural Company's workings at Newcastle, N.S.W. First assisted immigration to N.S.W. S.A.—Wakefield's first colonization committee. W.A.—Appointment of Executive and Legislative Councils.

1832 N.S.W.—Savings Bank of N.S.W. established.

1833 N.S.W.—First School of Arts established at Sydney.

1834 N.S.W.—First settlement at Twofold Bay. Vic.—Settlement formed at Portland Bay by Henty Bros. Qld.—Leichhardt reached Gulf of Carpentaria. S.A.—Formation of the South Australian Association. W.A.—Severe reprisals against natives at Pinjarrah.

Year.

1835 Vic.—John Batman arrived at Port Phillip; made treaty with the natives for 600,000 acres of land; claim afterwards disallowed by Imperial Government. John Pascoe Fawkner founded Melbourne.

1836 N.S.W.—Mitchell's overland journey from Sydney to Cape Northumberland, Vic. "Squatting" formally recognized. Vic.—Proclamation of Port Phillip district as open for settlement. S.A.—Settlement founded at Adelaide under Governor Hindmarsh.

1837 N.S.W.—Appointment in London of Select Committee on Transportation. Vic.—Melbourne planned and named by Governor Bourke. First Victorian post-office established in Melbourne. First overlanders from Sydney arrived at Port Phillip.

1838 N.S.W.—Discontinuance of assignment of convicts. Qld.—Settlement of German missionaries at Brisbane. S.A.—"Overlanding" of cattle from Sydney to Adelaide along the Murray route by Hawden and Bonney. Settlement at Port Essington, Northern Territory, formed by Captain Bremer.

1839 N.S.W.—Gold found at Vale of Clwydd by Count Strezlecki. S.A.—Lake Torrens discovered by Eyre. Port Darwin discovered by Captain Stokes. W.A.—Murchison River discovered by Captain Grey.

1840 N.S.W.—Abolition of transportation to New South Wales. Land regulations—proceeds of sales to be applied to payment for public works and expenditure on immigration. Vic.—Determination of northern boundary. Qld.—Penal settlement broken up and Moreton Bay district thrown open. S.A.—Eyre began his overland journey from Adelaide to King George's Sound.

1841 N.S.W.—Gold found near Hartley by Rev. W. B. Clarke. Separation of New Zealand. W.A.—Completion of Eyre's overland journey from Adelaide to King George's Sound. Tas.—Renewal of transportation.

1842 N.S.W.—Incorporation of Sydney. Vic.—Incorporation of Melbourne. S.A.—Discovery of copper at Kapunda.

1843 N.S.W.—First Representative Constitution (under Act of 1842). First manufacture of tweed. Qld.—Moreton Bay granted legislative representation.

1844 S.A.—Sturt's last expedition inland. Qld.—Leichhardt's expedition from Condamine River to Port Essington.

1845 N.S.W.—Mitchell's explorations on the Barcoo. Qld.—Explorations by Mitchell and Kennedy. S.A.—Discovery of the Burra copper deposits. Sturt discovered Cooper's Creek.

1846 N.S.W.—Initiation of meat preserving. Qld.—Foundation of settlement at Port Curtis. S.A.—Proclamation of North Australia. W.A.—Foundation of New Norcia Mission.

1847 N.S.W.—Iron smelting commenced near Berrima. Overland mail established between Sydney and Adelaide. Vic.—Melbourne created a City. Qld.—Explorations by Leichhardt, Burnett, and Kennedy.

1848 Qld.—Leichhardt's last journey. Kennedy speared by the blacks at York Peninsula. Chinese brought in as shepherds.

1849 N.S.W.—Indignation of colonists at arrival of convict ship *Hashemy*. Exodus of population to goldfields of California. Vic.—*Randolph* prevented from landing convicts. Qld.—Assignation of convicts per *Hashemy* to squatters on Darling Downs. W.A.—Commencement of transportation to Western Australia.

1850 N.S.W.—Final abolition of transportation. First sod of first Australian railway turned at Sydney. Vic.—Gold discovered at Clunes by Hon. W. Campbell. Representative government granted. S.A.—Representative government granted. W.A.—Pearl oysters found by Lieut. Helpman at Saturday Island Shoal. Tas.—Representative government granted.

1851 N.S.W.—Payable gold discovered by Hargraves at Lewis Ponds and Summerhill Creeks. Telegraph first used. Vic.—Separation of Port Phillip—erected into independent colony under the name of Victoria. Discovery of gold in various localities. "Black Thursday," 6th Feb., a day of intense heat, when several persons died and a vast amount of damage to property was occasioned by fires. W.A.—Proclamation of Legislative Council Act.

Year.

1852 N.S.W.—Arrival of the *Chusan*, first P. and O. mail steamer from England. S.A.—First steamer ascends the Murray River to the junction with the Darling. Tas.—Meeting of first elective Council protests against transportation. Payable gold discovered at The Nook, near Fingal, and at Nine Mile Springs.

1853 Tas.—Abolition of transportation.

1854 Vic.—Opening of first Victorian railway—Flinders-street to Port Melbourne. Riots on Ballarat gold-fields. Storming of the Eureka Stockade, 3rd Dec.

1855 N.S.W.—Opening of railway—Sydney to Parramatta. Mint opened. Gregory's expedition in search of Leichhardt.

1856 N.S.W.—Pitcairn Islanders placed on Norfolk Island. W.A.—A. C. Gregory's expedition in search of Leichhardt.

Responsible Government in N.S.W., Vic., S.A., and Tas. (Act of 1855).

1857 N.S.W.—Wreck of the *Dunbar* (119 lives lost), and *Catherine Adamson* (21 lives lost), at Sydney Heads. Select Committee on Federation. Vic.—Manhood suffrage and vote by ballot. S.A.—Passage of Torrens' Real Property Act.

1858 N.S.W.—Establishment of manhood suffrage and vote by ballot. Telegraphic communication between Sydney, Melbourne, and Adelaide. Qld.—Canoona gold rush.

1859 Qld.—Proclamation of Queensland as separate colony. Tas.—First submarine cable, via Circular Head and King Island to Cape Otway.

1860 Vic.—Burke and Wills left Melbourne and crossed to Gulf of Carpentaria. S.A.—Copper discoveries at Wallaroo and Moonta.

1861 N.S.W.—Anti-Chinese riots at Lambing Flat and Burrangong gold-fields. Opening of first tramway in Sydney. Regulation of Chinese immigration. Vic.—Burke and Wills perished at Cooper's Creek, near Innamincka, S.A.

1862 N.S.W.—Abolition of State aid to religion. Real Property Act. S.A.—Stuart crossed the Continent from south to north. W.A.—First export of pearl-shell.

1863 Vic.—Intercolonial Conference at Melbourne. S.A.—Northern Territory taken over. W.A.—Initiation of settlement in the North-west district. Henry Maxwell Lefroy discovered and traversed area now comprised in the Coolgardie-Kalgoorlie gold-field.

1864 Qld.—First railway begun and opened. First sugar made from Queensland cane. Tas.—First successful shipment of English salmon ova.

1865 N.S.W.—Destruction by fire of St. Mary's Cathedral, Sydney.

1866 N.S.W.—Passage of Public Schools Act of (Sir) Henry Parkes. S.A.—Introduction of camels for exploration, etc.

1867 Vic.—Imposition of protective tariff. Qld.—Discovery of gold at Gympie.

1868 N.S.W.—Attempted assassination of the Duke of Edinburgh at Clontarf, near Sydney. W.A.—Arrival of the *Hougomont*, last convict ship. Tas.—First sod of first railway (Launceston and Western) turned by Duke of Edinburgh.

1869 W.A.—First telegraph line opened from Perth to Fremantle.

1870 N.S.W.—Intercolonial Exhibition opened at Sydney. Imperial troops withdrawn. Vic.—Intercolonial Congress at Melbourne. S.A.—Commencement of transcontinental telegraph.

1871 N.S.W.—Permanent military force raised. W.A.—Passage of Elementary Education Act. Forrest's explorations. Tas.—Discovery of tin at Mount Bischoff. Launceston-Western railway opened for traffic.

1872 N.S.W.—International Exhibition at Sydney. Vic.—Mint opened. S.A.—Cable from Java to Port Darwin. Completion of transcontinental telegraph line.

1873 N.S.W.—Intercolonial Conference at Sydney. First volunteer encampment. Inauguration of mail service with San Francisco.

1874 N.S.W.—Triennial Parliaments Act passed. Intercolonial Conference. W.A.—John and Alexander Forrest arrived at Overland Telegraph from Murchison.

1875 Qld.—Transfer of Port Albany Settlement to Thursday Island.

1876 N.S.W.—Completion of cable—Sydney (La Perouse) to Wellington (Wakapuaka). W.A.—Giles crosses colony from east to west. Tas.—Death of Truganini, last representative of Tasmanian aborigines.

Year.

1877 W.A.—Opening of telegraphic communication with South Australia.

1878 Qld.—Restriction of Chinese immigration.

1879 N.S.W.—First artesian bore at Killara. International Exhibition at Garden Palace, Sydney. First steam tramway. W.A.—A. Forrest's explorations in the Kimberley district, and discovery of the Fitzroy pastoral country.

1880 N.S.W.—Public Instruction Act passed. Vic.—Opening of first Victorian International Exhibition at Melbourne.

Federal Conference at Melbourne and Sydney.

1881 N.S.W.—Further restrictions on Chinese immigration.

Visit to Australia of T.R.H. Prince Albert Victor and Prince George.

1882 N.S.W.—Garden Palace destroyed by fire. W.A.—Nugget of gold found between Roebourne and Cossack.

1883 N.S.W.—Discovery of silver at Broken Hill. Completion of railway between New South Wales and Victoria. Qld.—Annexation of New Guinea—repudiated by Imperial authorities.

Federal Conference held at Sydney. Federal Council created.

1884 Federation Bill passed in Victoria and rejected in New South Wales. British protectorate declared over New Guinea.

1885 N.S.W.—Military contingent sent to the Sudan. Opening of the Broken Hill Proprietary Silver Mines. W.A.—Gold found by prospectors on the Margaret and Ord Rivers in the Kimberley district. Tas.—Silver-lead discovered at Mount Zeehan.

1886 Tas.—Discovery of gold and copper at Mount Lyell.

First session of Federal Council met at Hobart on the 26th January.

1887 N.S.W.—Disaster at Bulli coal mine (81 lives lost). Peat's Ferry (Hawkesbury River) railway accident. S.A.—International Exhibition at Adelaide. W.A.—Cyclone destroyed nearly the whole pearling fleet off the Ninety-Mile Beach—200 lives lost. Gold discovered at Southern Cross.

Australasian Conference in London. Australasian Naval Defence Force Act passed.

1888 N.S.W.—Centennial celebrations. Restrictive legislation against Chinese, imposing poll-tax of £100. Vic.—Second Victorian International Exhibition held at Melbourne. Qld.—Railway communication opened between Sydney and Brisbane.

Conference of Australian Ministers at Sydney to consider question of Chinese immigration. First meeting of the Australasian Association for the Advancement of Science held in Sydney.

1889 Qld.—Direct railway communication established between Brisbane and Adelaide. W.A.—Framing of new Constitution.

1890 W.A.—Responsible Government granted.

Meeting at Melbourne of Australasian Federation Conference.

1891 N.S.W.—Election to Legislative Assembly of 35 Labour members. Arrival of Australian Auxiliary Squadron. Cessation of assisted immigration. W.A.—Discovery of gold on the Murchison.

Federal Convention in Sydney: draft bill framed and adopted.

1892 W.A.—Discovery of gold by Messrs. Bayley and Ford at Coolgardie.

1893 N.S.W.—Departure by the *Royal Tar* of colonists for "New Australia."

Financial crisis, chiefly affecting the eastern States.

1895 N.S.W.—Free-trade tariff. Land and income taxes introduced.

Conference of Premiers at Hobart *re* Federation.

1896 N.S.W.—People's Federal Convention at Bathurst.

1897–8 Sessions of Federal Convention at Adelaide, Sydney, and Melbourne.

1898 N.S.W.—First surplus of wheat for export.

Draft Federal Constitution Bill submitted to electors in Victoria, New South Wales, South Australia, and Tasmania. Requisite statutory number of votes not obtained in New South Wales.

Year.

1899 First contingent of Australian troops sent to South Africa. Conference of Premiers in Melbourne to consider amendments to Federal Constitution Bill. Referendum—Bill accepted by New South Wales, Victoria, Queensland, South Australia, and Tasmania.

1900 N.S.W.—Old-age pensions instituted.

Contingents of naval troops sent to China. Commonwealth Constitution Act received Royal Assent, 9th July. Proclamation of Commonwealth signed, 17th September. Mr. (afterwards Sir) Edmund Barton formed first Federal Ministry.

1901 Vic.—Old-age Pensions instituted.

Proclamation of the Commonwealth at Sydney. First Federal Parliament opened at Melbourne by the Duke of Cornwall and York. Interstate freetrade established.

1902 N.S.W.—Disastrous explosion at Mount Kembla Colliery—95 lives lost. W.A.—Opening of pumping station at Northam in connexion with Gold-fields water supply. Completion of Pacific Cable (all-British).

First Federal Tariff.

1903 Vic.—Railway Strike (Enginemen). W.A.—Coolgardie and Kalgoorlie Water Supply Scheme completed.

Inauguration of the Federal High Court.

1905 N.S.W.—Re-introduction of assisted immigration.

1906 Wireless telegraphy installed between Queenscliff, Vic., and Devonport, Tas. Papua taken over by Commonwealth.

1907 N.S.W.—Telephone, Sydney to Melbourne, opened.

Imperial Conference in London.

1908 Vic.—Railway accident at Braybrook Junction (Sunshine)—44 killed, 412 injured; compensation paid, £126,000.

Canberra chosen as site of Federal Capital.

1909 Imperial Defence Conference in London—Commonwealth ordered two destroyers and one first-class cruiser for fleet unit. Visit of Lord Kitchener to report and advise on Commonwealth military defence. Loss of the *Waratah* with 300 passengers and crew.

1910 Vic.—Railway accident at Richmond—9 killed, over 400 injured; compensation paid, £129,000.

Referendum on financial relations between the Commonwealth and the States. Penny postage. Arrival of the *Yarra* and *Paramatta*, first vessels of Australian navy. Australian Notes Act passed and first Commonwealth notes issued. Admiral Sir R. Henderson visited Australia to advise on naval defence.

1911 First Federal Census. Transfer of Northern Territory to Commonwealth. Introduction of compulsory military training. Launch of Commonwealth destroyer *Warrego* at Sydney. Establishment of penny postage to all parts of British Empire.

1912 Opening of Commonwealth Bank. First payments of Maternity Bonus. First sod turned at Port Augusta of Trans-Australian Railway (Port Augusta to Kalgoorlie). Gift of £1,000,000 to charities by Mrs. Walter Hall, Sydney, N.S.W.

1913 Arrival of battle cruiser *Australia*, and cruisers *Melbourne* and *Sydney*. Federal Capital named Canberra and foundation stone laid. Appointment of Interstate Commission.

1914 Visit of General Sir Ian Hamilton to report on military defence scheme. Double dissolution of Federal Parliament. Visit of British Association for the Advancement of Science.

European War. Australian Navy transferred to Imperial Navy. Australian troops offered to, and accepted by Imperial Government. Captured vessels added to Australian fleet. Submarine AE1 lost at sea whilst on service in the vicinity of New Britain. German Pacific possessions seized by Australian expeditionary force (military and naval). German Cruiser *Emden*, destroyed at North Cocos Island by H.M.A.S. *Sydney*.

Year.

1915 Opening of Broken Hill Proprietary's Ironworks at Newcastle, N.S.W. Navy Department created.

Australian troops landed at Dardanelles on 25th April. Loss of Submarine AE2 in operations at the Dardanelles. Census taken of Wealth and Income, and of males in Australia between ages of 17 and 60. Australian troops withdrawn from Gallipoli on 19th December.

1916 Record wheat harvest (180,000,000 bushels). Australian mounted troops operate in Egypt; afterwards join Desert Mounted Column. Other Australian troops transferred to France. Visit of Rt. Hon. W. M. Hughes, P.C., K.C., Prime Minister, to Canada, Great Britain, and South Africa, and to troops in England and France. Acquisition of steamships by the Commonwealth. First Military Service Referendum.

1917 National Ministry formed. General strike. Kalgoorlie-Port Augusta railway completed. Second Military Service Referendum.

1918 Population of Australia reaches 5,000,000. Australian troops in France formed into an Army Corps, commanded by Lieut.-Gen. Sir John Monash. Cessation of hostilities and surrender of Germany. Repatriation Department created. Australia House (Strand, London) opened by the King. Deaths of Sir G. H. Reid and of Lord Forrest of Bunbury.

1918–1919 Visit to America and Europe of Rt. Hon. W. M. Hughes, P.C., K.C., Prime Minister, representative at Peace Conference.

1919 Epidemic of influenza. Aerial flight England to Australia by Capt. Sir Ross Smith and Lieut. Sir Keith Smith. Death of Hon. Alfred Deakin. Visit to Australia of General Sir W. Birdwood. Visit of Admiral Lord Jellicoe.

1920 Visit to Australia of H.R.H. the Prince of Wales. Aerial flight England to Australia by Lieuts. Parer and McIntosh. Deaths of Rt. Hon. Sir Edmund Barton and of Rt. Hon. Sir Samuel Griffith.

1921 Visit to Imperial Conference of Rt. Hon. W. M. Hughes, P.C., K.C., Prime Minister. Second Commonwealth Census. Germany's Indemnity fixed (Australia's share approximately £63,000,000). Visit of Senator Pearce (Minister for Defence) to Disarmament Conference at Washington. Colliery disaster at Mt. Mulligan, Queensland—76 lives lost. Mandate given to Australia over Territory of New Guinea. First direct wireless press message, England to Australia.

1922 Economic Conference at Sydney. First lock on River Murray opened at Blanchetown, South Australia. Queensland Legislative Council abolished.

1923 Rt. Hon. S. M. Bruce, P.C., M.C., Prime Minister. Premiers' Conference, Melbourne. First sod, site of Federal Parliament House at Canberra, turned. Pan-Pacific Science Congress, Melbourne. Police dispute in Melbourne, with accompanying riots.

1923–24 Visit of Rt. Hon. S. M. Bruce, P.C., M.C., Prime Minister, to Imperial Conference, London, and afterwards to European and Gallipoli battlefields (September, 1923, to March, 1924).

1924 H.M.A.S. *Australia* sunk. Sea-plane flight round Australia by Wing-Commander Goble and Lieut. McIntyre. British Empire Exhibition at Wembley. First sale of land leases at Canberra. Visit of British cruiser squadron. Directorate of Commonwealth Bank appointed. Loan by British Government of £34,000,000 for Imperial migration.

1925 Visit of American fleet. Solar Observatory established at Canberra. De Pinedo's flight, Rome to Australia and return. Brisbane-Kyogle railway commenced. North Shore (Sydney) Bridge commenced. Department of Markets and Migration established.

OFFICIAL YEAR BOOK

OF THE

COMMONWEALTH OF AUSTRALIA, 1925,

AND EARLIER YEARS.

CHAPTER I.

DISCOVERY, COLONIZATION, AND FEDERATION OF AUSTRALIA.

§ 1. Early Knowledge of Australia.

1. **Introduction.**—It is proposed to give here only a brief summary of the more important facts relating to the early history of Australian discovery. A more complete account of this subject, together with bibliographical references thereto, may be found in Year Book No. 1 (pp. 44 to 51), although this account must be modified somewhat in view of later investigations.

2. **Early Tradition.**—It would appear that there was an early Chaldean tradition as to the existence of an Austral land to the south of India. Rumours to that effect in course of time found their way to Europe, and were probably spread by travellers from Indian seas, more especially by the Greek soldiers who accompanied Alexander the Great [B.C. 356–323] to India. References to this *Terra Australis* are found in the works of Ælianus [A.D. 205–234], Manilius [probably a contemporary of Augustus or Tiberius Cæsar], and Ptolemy [A.D. 107–161]. In some of the maps of the first period of the Middle Ages there is evidence which might warrant the supposition of the knowledge of the existence of a *Terra Australis*, while some idea of the Austral land appears in the maps and manuscripts of the fourteenth and fifteenth centuries. But much of the map-drawing in these early days was more or less fanciful, and there is no evidence definitely connecting this so-called *Terra Australis* with Australia.

3. **Discovery of Australia.**—(i) *General.*—The Venetian traveller, Marco Polo [1254–1324], refers to a land called Locac, which through a misunderstanding of his meaning was long thought to be Australia. But Marco Polo knew nothing of any land to the south of Java, and in any case the description given of the so-called Locac could not possibly be applied to Australia, as the writer speaks of elephants, etc. On a Mappamundi in the British Museum, of not later date than 1489, there is a coast-line which has been considered to represent the west coast of Australia. Investigation by Wood and others proves this claim to be merely fanciful. Martin Behaim's globe, the

oldest known globe extant, constructed in 1492, also shows what purports to be a part of Australia's coast-line, and a globe discovered in Paris bears an inscription to the effect that the *Terra Australis* was discovered in 1499. These also have other countries located in impossible positions. The term *Terra Australis* was, however, also applied to the region now known as Tierra del Fuego, hence little weight can be attached to this reference.

In the Dauphin map [about 1530-1536] Jave la Grande has been supposed by some to represent Australia, but an inspection of the fanciful animals and other figures thereon lends no weight to the idea. As a matter of fact much of this map-drawing was simply an attempt to support the old notion that the land surface of the southern hemisphere must balance that of the northern.

(ii) *Arab Expeditions.* It has been stated that the Arabs had come to Australia long before the Portuguese, the Spanish, or the Dutch, but there is no evidence to support the statement.

(iii) *Spanish and Portuguese Expeditions.* The last decade of the fifteenth century and the commencement of the sixteenth saw numerous expeditions equipped in the ports of Spain and Portugal for the purpose of exploiting the new world. The Portuguese rounded the southernmost cape of Africa, which became known as the Cape of Good Hope, and pushed eastward. The Spaniards, relying on the scientific conclusion that the world was spherical, attempted to get to the east by deliberately starting out west, Magalhaens by so doing reaching the Philippine Islands in 1521.

It may be mentioned that in 1606, Quiros, on reaching the island that has retained the name of Espiritu Santo (the largest island of the New Hebrides group) thought that he had come to this great land of the South, and therefore named the group *La Austrialia del Espiritu Santo.* Torres, who had been with him, passed through the strait which now bears his name, and proceeded to the Philippine Islands. This voyage marks the close of Spanish activity in the work of discovery in the South Seas.

(iv) *Discoveries by the Dutch.* With the decline of Portuguese and Spanish naval supremacy came the opportunity of the Dutch for discovery. Cornelius Wytfliet's map, of which there was an English edition, published at Louvain in 1597, indicates roughly the eastern and western coasts of Australia, as well as the Gulf of Carpentaria. The following often quoted passage, occurs in Wytfliets' "*Descriptionis Ptolemaicae Augmentum*" "The *Australis Terra* is the most southern of all lands. It is separated from New Guinea by a narrow strait. Its shores are hitherto but little known, since after one voyage and another, that route has been deserted and seldom is the country visited, unless when sailors are driven there by storms. The *Australis Terra* begins at one or two degrees from the equator, and is maintained by some to be so great in extent that, if it were thoroughly explored, it would be regarded as a fifth part of the world."

The Dutch East India Company, in 1605, sent the *Duyfken* from Bantam to explore the Islands of New Guinea. During March in the following year the *Duyfken* coasted along the southern shores of New Guinea, and followed the west coast of Cape York peninsula as far as Cape Keer-Weer (Turn again). Dirck Hartogs (on the plate in the Amsterdam Museum recording his voyage the name is written Dirck Hatichs), in the *Eendracht* in 1616, sailed along a considerable part of the west coast of the Continent. It may be mentioned that the route was not definitely selected, but that the navigator simply went further East than the usual course from the Cape to Java.

In 1618 the *Zeewolf* found land in lat. 20° 15′ south, and in the following year Frederik Houtman discovered the reef off the west coast, now known as *Houtman's Abrolhos.*

In 1622 the Dutch vessel *Leeuwin* rounded the Cape at the south-west of the continent which now bears that name, and in 1623 the Dutch vessels *Pera* and *Arnhem* discovered Arnhem Land, the peninsula on the western side of the Gulf of Carpentaria, which was so named in compliment to Peter Carpentier, Governor of the Dutch East India Company.

In 1627, Francis Thysz, commander of the *Gulde Zeepaerd*, with Pieter Nuyts, of the Dutch Council of Seventeen, on board, coasted along a portion of the shore of the Great Australian Bight. In 1628, De Witt, commander of the *Vianen*, discovered land on the north-west, viz., in about latitude 21° S. The *Batavia*, commanded by Francis Pelsart, was wrecked on the western coast of Australia in 1629. Pelsart was the first to carry to Europe an authentic account of the west coast of Australia, which, however, he described in the most unfavourable terms. The yachts *Amsterdam* and *Wesel*, under Gerrit Pool, visited the Gulf of Carpentaria in 1636.

Abel Janszoon Tasman, in command of two vessels, the *Heemskerck* and *Zeehaen*, set out in 1642 to ascertain the extent of the great southern continent. He named Van Diemen's Land, imagining it to be part of Australia proper, and sailing north-easterly discovered New Zealand. In his second voyage in 1644, Tasman visited the northern coast of Australia, sailing round the Gulf of Carpentaria and along the north-west coast as far down as the Tropic of Capricorn. The period of Dutch discoveries may be said to have ended with Tasman's second voyage, and, with the decline of Dutch maritime power, their interest in Australian discovery vanished. It may, however, be pointed out that William de Vlamingh landed at the mouth of the Swan River at the end of 1696.

4. Discoveries by the English.—The north-western shores of Australia were first visited by William Dampier, in the *Cygnet*, in 1688. In describing the country, Dampier stated that he was certain that it joined neither Asia, Africa, nor America. In 1699 he again visited Australia, in command of H.M.S. *Roebuck*, and on his return to England published an account in which a description is given of trees, flowers, birds, and reptiles observed, and of encounters with natives.

It was a question at the end of the seventeenth century whether Tasmania and New Zealand were parts of Australia, or whether they were separated from it, but themselves formed part of a great Antarctic Continent. Lieutenant James Cook's first voyage, though primarily undertaken for the purpose of observing the transit of Venus from Otaheite, had also for its objective to ascertain whether the unexplored part of the southern hemisphere were only an immense mass of water, or contained another continent. In command of H.M.S. *Endeavour*, a barque of 370 tons burthen, carrying about eighty-five persons, and accompanied by Sir Joseph Banks, Dr. Solander the naturalist, Green the astronomer, draughtsmen, and servants, Cook, after observing the transit of Venus at Otaheite, turned towards New Zealand, sighting that land on the 8th October, 1769, in the neighbourhood of Poverty Bay. Circumnavigating the North and South Islands, he proved that New Zealand was connected neither with the supposed Antarctic continent nor with Australia, and took formal possession thereof in the name of the British Crown. On the 20th April, 1770, at 6 a.m., Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, Botany Bay was discovered on the 29th April, 1770. The *Endeavour* dropped anchor and Cook landed on the following day. On the 2nd May, 1770, a seaman named Sutherland died and was taken ashore to be buried; he was probably the first British subject buried on Australian soil. Cook sailed along the coast in a northerly direction for nearly 1,300 miles until the 12th June, 1770, when the *Endeavour* was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months, and the *Endeavour* then again set her course to the north, sailing through Torres Straits and anchoring in the Downs on the 14th June, 1771. In 1772, Cook was put in command of the ships *Resolution* and *Adventure*, with a view of ascertaining whether a great southern continent existed, and having satisfied himself that, even if it did, it lay so far to the south as to be useless for trade and settlement, he returned to England in 1774. Cooks' last voyage was undertaken in 1776, and he met his death on the 14th February, 1779, by which date practically the whole coast of Australia had been explored. The only remaining discovery of importance was the existence of a channel between Tasmania and Australia. This was made by Flinders and Bass in 1798.

§ 2. The Annexation of Australia.

1. **Annexation of Eastern Part of Australia, 1770.**—Although representatives of the nations mentioned in the previous section landed or claim to have landed on the shores of Australia on various occasions during the sixteenth and seventeenth centuries, it was not until the 23rd August, 1770, that the history of Australia was brought into definite political connexion with western civilization. It was on that date that Captain Cook took possession " of the whole eastern coast, from lat. 38° to this place, lat. $10\frac{1}{2}°$ S., in right of His Majesty King George the Third." Cook, however, proclaimed British sovereignty only over what are now the eastern parts of New South Wales and Queensland, and formal possession, on behalf of the British Crown, of the whole of the eastern part of the Australian Continent and Tasmania was not taken until the 26th January, 1788. It was on this last date that Captain Phillip's commission, first issued to him on the 12th October, 1786, and amplified on the 2nd April, 1787, was read to the people whom he had brought with him in the " First Fleet."

A full historical account of the period referred to may be found in the " Historical Records of New South Wales," vol. I., parts 1 and 2.

2. **Original Extent of New South Wales.**—The commission appointed Phillip " Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south, and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south."

Although in November, 1769, Captain Cook had taken possession of the North Island of New Zealand, and in January, 1770, also of the South Island, it is a matter of doubt whether, at the time when Captain Phillip's commission was drawn up, New Zealand was considered as one of the " islands adjacent in the Pacific Ocean." The facts that under the Supreme Court Act (Imperial) of 1823, British residents in New Zealand were brought under the jurisdiction of the court at Sydney, while in 1839 there was a proposal on the part of the British Government to appoint a consul in New Zealand, would leave this an open question, as nothing more than extra-territorial jurisdiction may have been intended. Various hoistings of flags notwithstanding, New Zealand does not appear to have unequivocally become British territory until 1840. In that year, on the 29th January, Captain Hobson arrived at the Bay of Islands. On the following day he read the commission, which extended the boundaries of the colony of New South Wales so as to embrace and comprehend the Islands of New Zealand. On the 5th February, the Treaty of Waitangi, made with the native chiefs, was signed. Finally, on the 21st May, British sovereignty over the islands of New Zealand was explicitly proclaimed. From that date until the 3rd May, 1841, New Zealand was a dependency of New South Wales.

3. **Annexation of Western Australia, 1829.**—In June, 1825, Lieut.-General Sir R. Darling, then Governor of New South Wales, sent Major Lockyer, with a party numbering about 75, to found a settlement at King George III. Sound. The expedition sailed from Sydney on the 9th November, 1826, and landed at the Sound on the 26th December, following, and hoisted the British flag. The settlement was at first governed from Sydney, but on the 7th March, 1831, governmental authority was moved to the Swan River Settlement, and the convict portion of the population transferred to Van Diemen's Land. In 1826 Captain James Stirling was sent in H.M.S. *Success* on special service relative to the necessity of immediately seizing upon a position on the western coast near Swan River. In consequence of the favourable report made by him, the Imperial Government decided to establish a colony at Swan River. Captain Stirling was accordingly despatched as Lieutenant-Governor with a party of intending settlers in the *Parmelia*, and in the following month H.M.S. *Challenger*, under Captain Fremantle, was sent off from the Cape of Good Hope. On the 2nd May, 1829, Captain Fremantle

hoisted the British flag on the south head of the Swan River, and took possession of "all that part of New Holland which is not included within the territory of New South Wales," and in the following month the *Parmelia* arrived off Garden Island. Thus, before the middle of 1829, the whole territory now known as the Commonwealth of Australia had been constituted a dependency of the United Kingdom.

For a fuller account of the discovery and annexation of Western Australia reference may be made to the Western Australian Year Book, 1905, part I.

§ 3. The Creation of the Several Colonies.

1. **New South Wales as Original Colony.**—In Governor Phillip's commission of 1786, the mainland of Australia was divided by the 135th meridian of east longitude into two parts. The earliest colonists believed that Van Diemen's Land—the present State of Tasmania—was actually joined to the mainland, and it was not till 1798 that the contrary was known. In that year, by sailing through Bass Straits, Flinders and Bass proved that it was an island. The territory of New South Wales, as originally constituted, and of New Zealand, which may be included, although Cook's annexation was not properly given effect to until 1840, was thus :—

	Square Miles.
Australia, east of meridian 135° E.	1,454,312
Van Diemen's Land	26,215
New Zealand	103,862
Total	1,584,389

The western part of Australia, not then annexed, comprised 1,494,054 square miles.

2. **Separation of Van Diemen's Land, 1825.**—In 1825, Van Diemen's Land, as Tasmania was then called, was politically separated from New South Wales, being constituted a separate colony on the 14th June of that year. This reduced the area of New South Wales and its territorial dependencies by 26,215 square miles, that is, to 1,558,174 square miles.

3. **Extension of New South Wales Westward, 1825.**—In 1825 the western boundary of New South Wales was extended westward to the 129th meridian, thus increasing its area by 518,134 square miles, and making it, including New Zealand and excluding Tasmania, 2,076,308 square miles, or excluding also New Zealand, 1,972,446 square miles.

4. **Western Australia constituted a Colony, 1829.***—The territory annexed by Captain Fremantle in 1829, viz., "all that part of New Holland which is not included within the territory of New South Wales," extended eastward to the 129th meridian, and comprised 975,920 square miles. The constitution of this area into the Colony of Western Australia, now one of the six States of the Commonwealth, was the consequence of Fremantle's act. By it the annexation of the whole of the Continent of Australia by the British Crown was completed. The Australian colonies at this time were as indicated in the following table :—

Colony.	Date of Annexation.	Date of Creation.	Date of First Permanent Settlement.	Area Square Miles.
New South Wales (including New Zealand)	1770	1786	1788	2,076,308
Van Diemen's Land		1825	1803	26,215
Western Australia	1827	1829	1829	975,920

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* Although the foundation of Western Australia was made at Fremantle on 2nd June, 1829, the assertion of British dominion throughout the continent dates from the hoisting of the British flag at King George's Sound by Major Lockyer on 21st January, 1827.

5. Creation of South Australia as a Province, 1836.—On the 15th August, 1834, the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a "province," and towards the end of the year 1836 settlement took place. The first Governor, Captain Hindmarsh, R.N., arrived at Holdfast Bay on the 28th December, 1836, and on the same day the new colony was officially proclaimed. The new colony embraced 309,850 square miles of territory, which, lying south of the 26th parallel of south latitude, and between the 141st and 132nd meridians of east longitude, was up to that time included within the territory of New South Wales. Thus the area of New South Wales and New Zealand was reduced to 1,766,458 square miles.

6. Separation of New Zealand, 1840.—New Zealand, nominally annexed by Captain Cook and formally declared by proclamation in 1840 as a dependency of New South Wales, was, by letters patent of the 16th November of that year, constituted a separate colony under the powers of the Act 3 and 4 Vic., cap. 62, of the 7th August, 1840. Proclamation of the separation was made on the 3rd May, 1841. The area of the colony is 103,862 square miles. This separation reduced the political territory of New South Wales to 1,662,596 square miles.

7. The Colony of Northern Australia, 1847.—In the year 1846, when the British Government was experiencing difficulty as regards the transportation of convicts, an attempt was made by Mr. Gladstone, then Colonial Secretary, to establish a purely penal colony, without free settlers (at least at the outset), to be called Northern Australia. This colony did not succeed in securing a permanent place on the map, though its intended metropolis was successfully established and still bears Mr. Gladstone's name. The new colony comprised such of the territories of the colony of New South Wales as lay to the northward of latitude 26° S. Sir Charles Fitzroy, then Governor of New South Wales, was by letters patent appointed Governor of Northern Australia, the actual administration being left in the hands of a Superintendent, who was to be implicitly guided by instruction from the Governor. At the same time Northern Australia was constituted a separate colony under its own Government, although the authority which the Secretary of State for the Colonies would otherwise exercise had been deputed in the first instance to the Governor of New South Wales. In the *London Gazette* of the 8th May, 1846, Colonel Barney, R.E., was appointed Lieutenant-Governor of Northern Australia, and on the 25th January, 1847, he reached Port Curtis, accompanied by other public officers of the new colony. On the 30th January, the ceremony of swearing in the officials of Northern Australia was proceeded with, and on the same day the first *Government Gazette* of the new colony was issued in manuscript. This gazette contained a formal proclamation to the effect that all the land lying to the north of latitude 26° S. should thereafter be known as Northern Australia, and specified the names of the members of the Executive and Legislative Councils of the new colony. The headquarters of the Superintendent and other officials were established at Gladstone, although no other steps appear to have been taken towards securing a permanent settlement. In July, 1846, when Earl Grey succeeded Mr. Gladstone as Secretary of State for the Colonies, one of his first official steps was the complete reversal of the policy of his predecessor with respect to the founding of the new colony of Northern Australia, and by a dispatch dated the 15th November, 1846, Sir Charles Fitzroy was informed that the letters patent under which the new colony was constituted had been revoked. This news was received at Gladstone on the 15th April, 1847, and on the 9th May following the settlement was broken up. The territories comprised in the Colony of Northern Australia then reverted to New South Wales.

8. Separation of Victoria, 1851.—In 1851, what was known as the "Port Phillip District" of New South Wales, was constituted the Colony of Victoria, "bounded on the north and north-west by a straight line drawn from Cape Howe to the nearest source of the River Murray, and thence by the course of that river to the eastern boundary of the colony of South Australia." The area of the new colony was 87,884 square miles, and its separate existence took effect from the 1st July, 1851, upon the issuing of the writs for the first election of elective members of the Legislative Council; this reduced the territory New South Wales to 1,574,712 square miles.

9. Separation of Queensland, 1859.—The northern squatting districts of Moreton, Darling Downs, Burnett, Wide Bay, Maranoa, Leichhardt, and Port Curtis, together with the reputed county of Stanley, were granted an independent administration and formed into a distinct colony under the name of Queensland, by letters patent dated the 6th June, 1859, although separation from New South Wales was not consummated until the 10th December of the same year, upon the assumption of office of the first Governor. The territory originally comprised in the new colony was described in the letters patent as being so much of the colony of New South Wales as lies northwards of a line commencing on the sea coast at Point Danger, in latitude about 28° 8′ south, running westward along the Macpherson and Dividing Ranges and the Dumaresq River to the MacIntyre River, thence downward to the 29th parallel of south latitude, and following that parallel westerly to the 141st meridian of east longitude, which is the eastern boundary of South Australia, together with all the adjacent islands, their members, and appurtenances in the Pacific Ocean. The area of the new colony thus constituted was 554,300 square miles. By this separation the remaining territory of New South Wales was divided into two parts, one of 310,372 square miles, of which 309,432 square miles constitute the present State of New South Wales, and 940 square miles the Federal Capital Territory. The other area comprised 710,040 square miles, of which 116,200 square miles form now a part of Queensland, 523,620 square miles form the Northern Territory, and 70,220 square miles form now a part of South Australia.

10. **The Colonies at the Close of 1859.**—Since the separation of Queensland, no other creation of colonies has taken place in Australia, though the boundaries of New South Wales, Queensland, and South Australia were altered later. The dates of foundation of the Australasian colonies, and their areas at the close of 1859, were therefore as hereunder :—

AUSTRALASIAN COLONIES AS AT THE CLOSE OF 1859.

Colony.	Date of Annexation.	Date of Creation.	Date of First Permanent Settlement.	Area Square miles.
New South Wales	1770	1786	1788	1,020,412
Tasmania	1770	1825	1803	26,215
South Australia	1770	1834	1836	309,850
Victoria	1770	1851	1834	87,884
Queensland	1770	1859	1824	554,300
Western Australia	1827	1829	1829	975,920
New Zealand	1840	1841	1814	103,862 (*a*)

(*a*) Including outlying and annexed islands.

11. **The Changing Boundaries of the Colonies.**—When, on the 15th August, 1834, the Imperial Government constituted the province of South Australia, there lay between its western boundary and the eastern boundary of Western Australia (as proclaimed by Fremantle in 1829) a strip of country south of the 26th parallel of south latitude, and between the 132nd and 129th meridians of east longitude, legally included within the territory of New South Wales. The area of this territory, frequently but improperly referred to as "No Man's Land," has been calculated to cover approximately 70,220 square miles. On the 10th October, 1861, by the authority of the Imperial Act 24 and 25 Vic., cap. 44, the western boundary of South Australia was extended so as to cover this strip, and to coincide with the eastern boundary of Western Australia—the 129th meridian. By letters patent dated the 13th March, 1861, forwarded by the Colonial Secretary to the Governor of Queensland on the 12th April, 1862, the area of Queensland was increased by the annexation of "so much of the colony of New South Wales as lies to the northward of the 26th parallel of south latitude, and between the 141st and 138th meridians of east longitude, together with all and every the adjacent islands, their members, and appurtenances, in the Gulf of Carpentaria." The area of South Australia was therefore increased by 70,220 square miles, and became 380,070 square miles, while the area of Queensland increased by 116,200 square miles, became 670,500 square miles. Nearly two years after the accession of territory, viz., on the 6th July, 1863, the Northern Territory, containing 523,620 square miles—also formerly a part of New South Wales—was, by letters patent, brought under the jurisdiction of South Australia, which therefore

controlled an area of 903,690 square miles; whilst that of New South Wales was diminished by these additions to South Australia, and by the separation of the colonies of New Zealand, Victoria and Queensland, till its area became only 310,372 square miles. The territories of Tasmania, Western Australia, and the three other separated colonies with the exception of some minor islands added to Queensland, remain as originally fixed.

12. **The Colonies in 1900.**—From what has been said in the previous sub-section it will be seen that the immense area generally known as Australasia had by 1863 been divided into seven distinct colonies, the combined areas of which amounted to 3,078,443 square miles.

§ 4. Establishment of the Commonwealth of Australia.

1. **General.**—On the 1st January, 1901, the colonies mentioned, with the exception of New Zealand, were federated under the name of the "Commonwealth of Australia," the designation of "Colonies"—excepting in the case of the Northern Territory, to which the designation "Territory" is applied—being at the same time changed into that of "States." The total area of the Commonwealth of Australia is, therefore, 2,974,581 square miles. The dates of creation and the areas of its component parts, as determined on the final adjustment of their boundaries, are shown in the following table:—

THE COMMONWEALTH OF AUSTRALIA.—AREA, ETC., OF COMPONENT PARTS.

State.	Year of Formation into Separate Colony.	Present Area in Square Miles.	State.	Year of Formation into Separate Colony.	Present Area in Square Miles.
New South Wales(*a*)	1786	310,372(*a*)	Tasmania ..	1825	26,215
Victoria ..	1851	87,884	Northern Territory	1863	523,620
Queensland ..	1859	670,500			
South Australia ..	1834	380,070	(*b*)Area of the Commonwealth ..	..	2,974,581
Western Australia	1829	975,920			

(*a*) On the 1st January, 1911, the Federal Capital Territory embracing an area of 912 square miles was taken over by the Commonwealth from the State of New South Wales, and on 12th July, 1915, assent was given to an Act taking over a further area of 28 square miles at Jervis Bay, the area of that State therefore is now 309,432 square miles.

(*b*) The present Dominion of New Zealand was constituted a separate colony in 1841. The addition of its area, 103,862 square miles, to the total shown in the table above, gives a total for Australasia of 3,078,443 square miles as referred to in § 3, 12.

2. **Transfer of the Northern Territory to the Commonwealth.**—On the 7th December, 1907, the Commonwealth and the State of South Australia entered into an agreement for the surrender to and acceptance by the Commonwealth of the Northern Territory, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under the Northern Territory Surrender Act 1907 (assented to on the 14th May, 1908), and by the Commonwealth Parliament under the Northern Territory Acceptance Act 1910 (assented to on the 16th November, 1910). The Territory accordingly was transferred to the Commonwealth by proclamation on the 1st January, 1911.

3. **Transfer of the Federal Capital Territory to the Commonwealth.**—On the 18th October, 1909, the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 912 square miles as the seat of Government of the Commonwealth. In December, 1909, Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on the 5th December, 1910, a proclamation was issued vesting the Territory in the Commonwealth on and from the 1st January, 1911. By the Jervis Bay

Territory Acceptance Act 1915, which was assented to on 12th July, 1915, an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth.

4. **Transfer of British New Guinea or Papua.**—Under the administration of the Commonwealth, but not included in it, is British New Guinea or *Papua*, finally annexed by the British Government in 1884. This territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on the 1st September, 1906, under the authority of the Papua Act (Commonwealth) of 16th November, 1905. The area of Papua is about 90,540 square miles.

5. **Transfer of Norfolk Island.**—Although administered for many years by the Government of New South Wales, this island was, until 1st July, 1914, a separate Crown colony. On that date it was taken over by the Federal Parliament as a territory of the Commonwealth.

§ 5. The Exploration of Australia.

1. **Introduction.**—A fairly complete, though brief, account of the Exploration of Australia was given in Year Book No. 2 (pp 20 to 39). It is proposed to give here only a brief summary of the more important facts relating to the subject.

2. **Eastern Australia.**—(i) *General.* The first steps towards the exploration of New South Wales were taken by Captain Phillip and his officers, who, during 1788 and the years immediately following, made a number of excursions in the neighbourhood of Port Jackson, to Broken Bay, and along the Hawkesbury and Nepean Rivers.

(ii) *French Voyages of Exploration, 1788 to 1802.* Towards the close of the 18th century the French, who were supposed to covet territory in Australia, sent out several exploring expeditions. In 1788 two vessels under the command of Lapérouse put into Botany Bay to refit. In 1792 the French Admiral D'Entrecasteaux was in Australian waters with two vessels and discovered and named several places on the Tasmanian coasts. In 1800 an expedition, sent out by the French Republic, examined parts of the coasts of Van Diemen's Land and South Australia. It was chiefly in consequence of rumours to the effect that the French intended to establish a colony in Australia, that steps were taken by the British to form settlements at various places on the Australian coasts.

(iii) *Bass and Flinders, 1796 to 1803.* In 1796 and 1797 Bass and Flinders explored the coast in a southerly direction from Port Jackson as far as Western Port. In 1798 Bass, accompanied by Flinders and eight seamen, circumnavigated the island of Tasmania thus proving the existence of the straight which now bears his name. In 1801 Flinders again came to Australia in command of H.M.S. *Investigator*, which was the first vessel to completely circumnavigate the Australian continent.

(iv) *Discovery of Port Phillip, 1802.* On the 5th January, 1802, Lieutenant Murray, who had been sent out to trace the coast between Point Schanck and Cape Otway, sighted the entrance to Port Phillip, which, however, he did not enter, owing to stress of weather, until the 15th February. Shortly afterwards Flinders entered Port Phillip, and in 1803 Charles Robbins explored the Yarra for some miles above the present site of Melbourne.

(v) *The Blue Mountains Crossed, 1813.* In 1813 Gregory Blaxland succeeded in effecting a passage over the Blue Mountains, which had previously proved an inaccessible barrier to all attempts to extend the infant colony in a westerly direction. G. W. Evans, following on Blaxland's tracks, soon penetrated further inland and discovered and named the Fish, Campbell, Macquarie, and Lachlan Rivers. In 1817 and 1818 John Oxley, Allan Cunningham, Charles Frazer, and others explored a considerable part of the Lachlan and Macquarie Rivers, and discovered and named the Castlereagh River, the Arbuthnot Range, the Liverpool Plains, the Hastings River, and Port Macquarie.

(vi) *Hamilton Hume, 1814 to 1824.* In 1816 Hamilton Hume, who two years previously had explored the country round Berrima, discovered and named the Goulburn Plains and Lake Bathurst. In 1824, accompanied by William Hilton Hovell, Hume starting off from Lake George, reached the Murrumbidgee and sighted the Snowy Mountains. On the 16th December, 1824, he reached the Southern Ocean at the spot where Geelong now stands. This expedition had a great and immediate influence on the extension of Australian settlement.

(vii) *Allan Cunningham, 1817 to 1829.* In 1823 Cunningham, who had accompanied Oxley in 1817, discovered and named Pandora's Pass, leading to the Liverpool Plains from the Upper Hunter, and in 1827 he discovered the Darling Downs.

(viii) *Charles Sturt, 1828 to 1830.* In 1828 the Darling River was discovered by Sturt, who in the following year explored the Murray River, tracing it to its mouth at Lake Alexandrina in Encounter Bay. Sturt thus connected his overland journey with the discoveries of Flinders and other coastal explorers. In the meantime discovery on the Australian coasts had been followed up by Captains Wickham and Stokes in H.M.S. *Beagle.*

(ix) *Sir Thomas Mitchell 1831 to 1846.* In 1831 Mitchell discovered the lower courses of the Peel (Namoi), Gwydir, and Dumaresq Rivers, and identified the Upper Darling. Two years later he explored the country between the Bogan and Macquarie Rivers, and in 1835 he traced the Darling 300 miles down from Bourke. In 1836 he ascended the Murray and Loddon Rivers and discovered the Avoca, the Campaspe, and the Wimmera Rivers, reaching the coast near Cape Northumberland. On his return journey Mitchell visited Portland Bay, where he found the Henty family established, and ascending Mount Macedon, he saw and identified Port Phillip. In 1845 and 1846 Mitchell again set out, accompanied by Edmund B. Kennedy, and explored the Narran, Balonne, and Culgoa Rivers. Ascending the Balonne, he turned westward, exploring the Maranoa and the Warrego. Proceeding to the north he then discovered the Belyando and the Barcoo Rivers.

(x) *McMillan, Strzelecki, Leslie and Russell, 1839 to 1841.* In the meantime other explorers had been in the field and had made numerous discoveries. In 1839 and 1840 Angus McMillan discovered and named Lake Victoria, the Nicholson, Mitchell, and Macallister Rivers, and explored the country as far as the Latrobe River. In 1840 Strzelecki discovered Mount Kosciusko, the Latrobe River, and Lake King. In 1840 and 1841 Patrick Leslie and Stuart Russell explored the Condamine River.

(xi) *Leichhardt, 1844 to 1845.* In 1844 and 1845 Ludwig Leichhardt made a number of discoveries. Leaving the Condamine River he discovered the Dawson River, Peak Downs, the Planet and Comet Rivers, and Zamia Creek. Later on he found and named the Mackenzie, Isaacs, Suttor, Burdekin, Lynd, Mitchell, Leichhardt, Nicholson, McArthur and Roper Rivers, and after exploring part of the coast of the Gulf of Carpentaria, reached the settlement of Victoria at Port Essington. In 1848 Leichhardt equipped another expedition and set out from the Cogoon. No sure clue as to his fate or as to the fate of his companions has ever come to light.

(xii) *Kennedy, 1847 to 1848.* In 1848 Edmund Kennedy, who had accompanied Mitchell in 1845 and 1846, and who had further explored the Barcoo and Victoria Rivers in 1847, attempted to make his way up the eastern coast of Cape York Peninsula. After great hardships he reached the Escape River, where he was murdered by the blacks.

(xiii) *A. C. Gregory, 1846 to 1858.* A. C. Gregory's earliest explorations were in Western Australia, where in 1846 he discovered Lake Moore. In 1855 Gregory explored the Fitzmaurice and Victoria Rivers and Sturt's Creek. He examined the Gilbert River and its tributaries, and made his way in a westerly direction across to Brisbane. In 1858 Gregory explored the districts near the Barcoo and Thompson Rivers, Strzelecki's Creek and Lake Blanche.

(xiv) *Later Exploration of the North East, 1859 to 1872.* After Kennedy's ill-fated expedition the main portion of Eastern Australia was fairly well known. Certain parts of what is now Queensland, however, still remained unexplored. These were examined by G. E. Dalrymple in 1859, by Frederick Walker in 1862, by Frank and Alex. Jardine in 1864, and by William Hann in 1872. Hann discovered the Tate, Walsh, Palmer and Normanby Rivers. This expedition practically completed the exploration of Eastern Australia. The gold discoveries on the Palmer River in Queensland, following soon after, led to a considerable amount of minor exploration being carried out by prospectors whose labours, are, however, unrecorded.

3. Central Australia.—(i) *General.* In 1836 Colonel Light surveyed the shores of St. Vincent's Gulf, and selected the site for the settlement of Adelaide. In the same year Mitchell had succeeded in travelling overland from the Darling to Cape Northumberland, and the settlers found little difficulty in driving stock from various parts of New South Wales to the new country. A great deal of minor exploration was done by these pioneers, the first of whom to lead the way across to the Port Phillip settlement with sheep in 1837 was Charles Bonney. In 1838 the overlanding of stock was extended to Adelaide by Joseph Hawdon.

(ii) *Eyre, 1838 to 1841.* In 1841 Edward John Eyre, who had previously discovered Lake Hindmarsh, and had explored the country to the north-east of Spencer's Gulf, succeeded, after great hardship, in reaching Albany overland from Adelaide. After this expedition settlers soon spread in a northerly direction from Adelaide, and various expeditions in search of grazing country were carried out by these pioneers.

(iii) *Sturt's Later Explorations, 1844 to 1845.* In 1844 Charles Sturt, whose explorations in Eastern Australia have already been referred to, set out from the Darling on an expedition to reach the centre of the continent. He reached his furthest point in latitude 24° 30′ S. and longitude 137° 58′ E. in September, 1845, and, after enduring great privations, was compelled to retreat through want of water.

(iv) *Stuart, 1858 to 1862.* John MacDouall Stuart accompanied Captain Sturt on his last expedition. After minor explorations in the vicinity of Lake Eyre, Stuart made an unsuccessful attempt to cross the continent from south to north in 1860. After discovering the Frew, Fincke, and Stevenson Creeks, Chambers Pillar, and the McDonnell Range, he camped at the centre of Australia on the 22nd April, 1860. In the following year Stuart was placed in command of an expedition equipped by the South Australian Government, and succeeded in crossing the continent, reaching the sea at Chambers Bay on the 25th July, 1862.

(v) *Burke and Wills Expedition, 1860 to 1861.* In 1860 Robert O'Hara Burke and William Wills led an expedition northward from Melbourne to explore the country as far as the Gulf of Carpentaria. Through their arrangements having miscarried, both Burke and Wills perished in the bush, after having crossed the continent and returned to their depot at Fort Wills, only to find it deserted. Various relief expeditions were sent out, and among them may be specially mentioned Howitt's Relief Expedition, the Queensland Relief Expeditions under Walker and Landsborough, and the South Australian Relief Party under McKinlay. Though the actual work of exploration carried out by the Burke and Wills expedition was unimportant, the discoveries made by the relief parties sent out were of great value in opening up Central Australia.

(vi) *Giles, 1872 to 1876.* In 1872 Ernest Giles discovered Lake Amadeus and Mount Olga. In that year and in the following one he made unsuccessful attempts to force his way through the desert to the settlements of Western Australia. In 1875 Giles, accompanied by W. H. Tietkins, set out from Beltana, and after making his way in the vicinity of latitude 30° S., to the settled districts of Western Australia, returned to the Peake telegraph station by way of the Murchison, Gascoyne, and Ashburton Rivers.

(vii) *Later Explorations.* Other explorations in Central Australia were carried out by Major Warburton (1873), W. C. Grosse (1873), W. O. Hodgkinson (1875), Nathaniel Buchanan (1878), Frank Scarr (1878), Ernest Favenc (1878–83), H. V. Barclay (1877), A. Johns and P. Saunders (1876), David Lindsay (1883), H. Stockdale (1884) W. H., Tietkins (1889), A. Searcy (1882–96), and Hubbe (1896).

4. Western Australia.—(i) *General.* In 1791 George Vancouver, in command of H.M.S. *Discovery*, reached and named King George's Sound. On the 26th December, 1826, Major Lockyer, with a detachment of soldiers, landed at King George's Sound to form a settlement, under instructions from Sir Ralph Darling, then Governor of New South Wales. The settlement was established in order to forestall the French, who, it was rumoured, intended to occupy the harbour. [As stated on page 5 *ante*, the assertion of British dominion throughout the continent dates from the hoisting of the British flag at this locality on the 21st January, 1827]. Early in 1827 Captain James Stirling and Charles Frazer examined and reported upon the Swan River district with a view to forming a settlement there. In 1829 Captain Fremantle landed at the mouth of the Swan River and took possession of the country. A month later Stirling arrived with the first settlers.

(ii) *Early Explorers.* In November, 1829, Alexander Collie and Lieutenant Preston explored the coast between Cockburn Sound and Géographe Bay, and in the following month Dr. T. B. Wilson, R.N., discovered and named the Denmark River.

In 1830 John Septimus Roe explored the country in the neighbourhood of Cape Naturaliste and between the Collie and Preston Rivers, and in 1835 examined the districts between the headwaters of the Kalgan and Hay Rivers. In 1836 and 1839 Roe explored the country north and east of Perth, and in 1848 traced the course of the Pallinup River for some distance.

Other early explorers in the West were Ensign R. Dale (1830), Captain Bannister (1831), W. K. Shenton (1831), J. G. Bussell (1831), Lieutenant Preston (1831), Alexander Collie (1832), F. Whitfield (1833), A. Hillman (1833), G. F. Moore (1834), and Lieutenant Bunbury (1836).

(iii) *Grey, 1837 to 1839.* In 1837 Captain (afterwards Sir) George Grey discovered and traced the Glenelg River. In 1839 he explored the country between the Williams and Leschenault Rivers, and later succeeded in making his way along the coast from the mouth of the Gascoyne River to Perth.

(iv) *F. T. Gregory, 1857 to 1861.* In 1857 and 1858 Frank T. Gregory examined the upper reaches of the Murchison River and reached the Gascoyne River, which he descended to its mouth, whence he made his way to Perth. In 1861 Gregory explored the north-western districts, discovering the Fortescue, Ashburton, Shaw, De Grey, and Oakover Rivers.

(v) *H. M. Lefroy, 1863.* In 1863 Henry Maxwell Lefroy led a party from York, and after discovering Mt. Burges, traversed the Coolgardie, Kalgoorlie and Boulder areas, reaching a point about 21 miles east south-east of Boulder.

(vi) *John Forrest, 1869 to 1883.* In 1869, John Forrest (later Lord Forrest of Bunbury) penetrated to the east some distance past Mount Margaret and discovered Lake Barlee. In 1870 he succeeded in making his way from Perth to Adelaide via Esperance Bay, Israelite Bay, and Eucla, and in 1874, accompanied by his brother Alexander and four others, he crossed from Geraldton to the overland telegraph line near Peake Station. In 1883 Forrest explored a large portion of the Kimberley Division, Cambridge Gulf, and the lower part of the Ord River.

(vii) *Alexander Forrest, 1871 to 1879.* In 1879 Alexander Forrest, who had previously accompanied his brother on two expeditions, made his way from the De Grey River to the Daly Waters Station on the overland telegraph line, via Beagle Bay, the King Leopold Range, Nicholson Plains, and the Ord and Victoria Rivers.

(viii) *L. A. Wells, 1892 to 1897.* In 1892 Wells examined practically the whole of the still unexplored districts between Giles' track of 1876 and Forrest's route of 1874, and in 1896 and 1897 he explored the country between the East Murchison and Fitzroy Rivers.

(ix) *Later Explorations in Western Australia.* During the latter part of the 19th century various expeditions were sent out to explore those parts of Western Australia (chiefly in the north-western districts) which still remained unknown. Those whose names are connected with the later exploration of Western Australia are—David Carnegie (1896-7) who discovered a practical stock route between Kimberley and Coolgardie; W. Carr-Boyd (1883-96), who explored the country near the Rawlinson Ranges and made several excursions between the southern goldfields of Western Australia and the South Australian border; H. F. Johnston, G. R. Turner, and E. T. Hardman (1884), who discovered the Mary and Elvire Rivers; F. S. Brockman, Charles Crossland, Gibb Maitland, and Dr. F. M. House (1901), who explored the extreme north of the State; F. H. Hann (1896–1907), who made various excursions in the north-west and between Laverton and Oodnadatta.

(x) *Other Explorers.* Other explorers whose names are connected with the exploration of Western Australian are—George Eliot, who, in 1839, explored the country between the Williams and Leschenault; William Nairne Clark, who, in 1841, discovered immense jarrah and karri forests in the south-west; R. H. Bland (1842); H. Landor (1842); Lieutenant Helpmann (1844); Captain H. M. Denham (1858); B. D. Clarkson, C. E. and A. Dempster, and C. Harper (1861); C. C. Hunt and Ridley (1863); R. J. and T. C. Sholl (1865); A. McRae (1866); Philip Saunders and Adam Johns (1876); H. Stockdale (1884); H. Anstey (1887); F. Newman and W. P. Goddard (1890); J. H. Rowe (1895); C. A. Burrows and A. Mason (1896); Hugh Russell (1897); and John Muir (1901).

§ 6. The Constitutions of the States.

1. **Introduction.**—The subject of "General Government" is dealt with in some detail in Chapter III., but it has been thought desirable to give here a summary of the chief events in the constitutional history of Australia. More extended reference will be found in previous Year Books.

2. **Early Constitutional History.**—(i) *General.* The earliest statute relating to Australia was passed in the year 1784, and empowered the King in Council to appoint places in Australia to which convicts might be transported. On the 6th of December, 1786, His Majesty's "territory of New South Wales, situated on the east part of New Holland," was appointed such a place.

(ii) *The First Constitutional Charter.* In 1823 an Act was passed authorizing the creation of a Council, charged with certain legislative powers of a limited character. This charter was amended by an Act passed in 1828, and applied both to New South Wales and to Van Diemen's Land.

(iii) *First Representative Legislature.* In 1842 the Imperial Government established in New South Wales a Legislative Council consisting of thirty-six members, twelve of whom were to be nominated by the Sovereign and twenty-four elected by the inhabitants of the colony.

(iv) *The Australian Colonies Government Act 1850.* The two main objects of this Act were (*a*) the separation of the Port Phillip District from New South Wales, and (*b*) the establishment of an improved system of government in all the Australian colonies. Power was given to the Governor and Legislative Council in each colony to alter the qualifications of electors and members as fixed by the Act, or to establish, instead of the Legislative Council, a Council and a House of Representatives, or other separate Legislative Houses, and to vest in such Houses the powers and functions of the old Council.

3. **New South Wales.**—After the Act just referred to had been proclaimed, an Electoral Bill for New South Wales was passed, increasing the number of members of the Council from thirty-six to fifty-four. In 1851 a remonstrance was despatched by the Legislative Council to the Secretary of State for the Colonies, objecting to the form of Constitution which the Imperial authorities proposed to grant under the Act of 1850. In 1852 the Secretary of State for the Colonies suggested that the Legislative Council should proceed to frame a Constitution resembling that of Canada and based on a bi-cameral Legislature. A new Constitution was, on the 21st December, 1853, adopted by the Council and transmitted to the Secretary of State for the Colonies. With some amendments this Bill became law on the 16th July, 1855. It is now known as the New South Wales Constitution Act 1855, and under its provisions a fully responsible system of government was granted. The first Parliament, under the new Constitution was opened on the 22nd May, 1856. The Constitution was amended by Acts passed in 1857, 1884, and 1890, these Acts being repealed and consolidated by the Constitution Amendment Act of 1902. The last amending Act was passed in 1916.

4. **Victoria.**—After the proclamation of the Australian Colonies Government Act of 1850, the old Legislative Council of New South Wales met on the 28th March, 1851, and passed two Acts specially concerning Victoria. The first provided for the continuation of the powers and functions of all public officers resident within the Port Phillip District until removed or reappointed by the Government of Victoria. The other Act provided that the Legislative Council of Victoria should consist of thirty members, ten nominee and twenty elective, with powers and functions similar to those of the reorganized Legislative Council of New South Wales. A Constitution was drafted by a committee of the Legislative Council, and was embodied in a Bill which was passed and reserved for the Queen's assent on 28th March, 1854. The Enabling Bill was passed

and assented to on the 16th July, 1855, and the new Constitution was proclaimed on the 23rd November following. Several amendments have since been made, the last amending Act having been passed in 1922.

5. **Queensland.**—As part of New South Wales, the Moreton Bay District enjoyed the benefits of responsible government under the Constitution Act of 1855.

By the New South Wales Constitution Act 1855 the power granted to the Queen in 1842 to alter the northern boundary of New South Wales was preserved, and Her Majesty was authorized, by letters patent, to erect into a separate colony any territory which might be so separated. The separation was effected by letters patent dated the 6th June, 1859, and the Constitution of the new colony was embodied in an Order in Council of the same date.

The Order in Council provided that there should be within the colony of Queensland a Legislative Council and a Legislative Assembly, The first Parliament under the new Constitution was convened on the 29th May, 1859. By the Constitution Amendment Act of 1922 the Legislative Council was abolished.

6. **South Australia.**—In the exercise of the provisions of the Act by which the Province was created, a governor, a judge, seven commissioners, and other officials were appointed. Under an Act passed in 1842 the system of government was remodelled; the colonization commissioners were abolished, and the Province became a Crown colony with a nominated Legislative Council.

In 1855 a new Legislative Council passed a Bill to create a bi-cameral Legislature, which received the Royal assent in 1856. This Act, known as the South Australian Constitution Act 1856, confers no legislative powers except by reference to the Act of 1850. The first session of the new Parliament commenced on the 22nd April, 1857. There has been a large number of amendments to the Constitution, the latest having been passed in 1921.

7. **Western Australia.**—By an Order in Council dated the 1st November, 1830, the first Executive Council was constituted, while in the following year a Legislative Council, which consisted at first solely of members of the Executive Council, was formed. In August, 1870, writs were issued for the election of a Council to consist of twelve elected and six nominated members. These members were altered from time to time. In 1889 the Legislative Council was dissolved, and a general election took place, the principal question being the introduction of responsible government. A Constitution providing for the creation of a bi-cameral Legislature was drafted, and responsible government was proclaimed in the colony on the 21st October, 1890. The first Parliament under the new Consititution met on the 30th December, 1890. On the 18th July, 1893, the Legislature of Western Australia passed an Act to amend the Constitution, abolishing the nominee Council, and substituting one elected by the qualified inhabitants of the colony. Amendments have been made by various Acts, the last of which was passed in 1921.

8. **Tasmania.**—Under an Order in Council dated the 14th June, 1825, and made in pursuance of the provisions of an Act passed in 1823, Van Diemen's Land, as it was officially known until the year 1853, was separated from New South Wales and was proclaimed a separate colony, with a Lieutenant Governor, an Executive, and a Legislative Council. It was not until the Imperial Act of 1850 was passed, that a system of representative government was introduced. A Constitution Bill was drafted and passed by the Legislative Council, and was assented to and proclaimed on the 24th October, 1856.

The first Parliament under the new Constitution was opened on the 2nd December, 1856. The Constitution has been amended by various Acts, the latest of which was passed in 1923.

9. **Reservation of Bills.**—The reservation of Bills passed by the Legislature of any State is dealt with under the provisions of the Australian States Constitution Act 1907, a short outline of the provisions of which will be found in Official Year Book, No. 18, p. 17.

§ 7. The Federal Movement in Australia.

1. **Early Stages in the Federal Movement.**—A summary is given in Year Book No. 1 (pp. 17 to 21) of the "Federal Movement in Australia" from its earliest inception to its consummation. Limits of space will permit of the insertion of a synopsis only in the present issue.

Owing to the circumstances of their growth, the initial tendency in Australia was naturally towards the individualistic evolution of the several settlements, yet from the earliest period there was a clear recognition of the importance of intercolonial reciprocity. Governor Fitzroy, in 1846, and Earl Grey, in 1847, saw that there were questions which affected "Australia collectively, the regulation of which in some uniform manner, and by some single authority, may be essential to the welfare of them all," and a "central legislative authority for the whole of the Australian colonies" was actually contemplated. Even so far back as 1849, a Privy Council Committee recommended a uniform tariff, and the constituting of one of the Governors as Governor-General of Australia, Sir Charles Fitzroy being actually appointed as "Governor-General of all Her Majesty's Australian Possessions." The office, however, was nominal rather than actual and expired in 1861. Dr. Lang's idea of "a great federation of all the colonies of Australia" was put forward in 1852, and a Victorian committee in 1853 advocated the value of a General Assembly of Delegates for the whole of Australia.

The need of union was urged by the *Sydney Morning Herald* in 1854, and, although Wentworth sought in 1857 to bring about the creation of a Federal Assembly, a draft "Enabling Bill" proved unacceptable to Her Majesty's Government. In the same year Mr. (afterwards Sir) Charles Gavan Duffy secured the appointment of a select committee of the Victorian Legislative Assembly to consider the necessity of a federal union of the Australasian colonies. The need for such a union was unanimously affirmed, the general opinion being that it should not be longer delayed. In the same year, a select committee of the New South Wales Legislative Council also considered this question, fully recognizing that antagonisms and jealousies were likely to arise through delay.

Union was in a fair way towards realization when the advent of the Cowper Administration destroyed all chance of attaining it, owing to the antagonism of Mr. Cowper and Mr. (afterwards Sir) James Martin. South Australia, also in the same year, and Queensland in 1859, were both unfavourable to the federal scheme. A second attempt by Mr. Duffy to bring about a conference in 1860 failed also.

Tariff differences, however, compelled political attention to the matter, and in 1862 correspondence was opened up by South Australia regarding tariff uniformity. By means of intercolonial conferences between 1863 and 1880 some degree of uniformity in legislation and a measure of concerted administration were realized. In March, 1867, Mr. (afterwards Sir) Henry Parkes expressed himself as follows:—" . . . The time has arrived when these colonies should be united by some federal bond. . . . There are questions projecting themselves . . . which cannot be dealt with by . . . individual Governments. . . . I believe it will lead to a permanent federal understanding."

2. **The Federal Council.**—The conference of November-December, 1880, and January, 1881, recommended the creation of a Federal Council, believing that the time had not arrived for a Federal Constitution with a Federal Parliament. Until 1883, however, every effort proved abortive, but in November of that year a convention, at which the seven colonies and Fiji were represented, met in Sydney. A Bill to establish a Federal Council for Australasia, drafted by Mr. (later Sir) Samuel Griffith, was, after some modification by a committee of the convention, adopted. In July and August, 1884, the Crown was addressed, praying for the enactment of a Federal Council Act. New South Wales and New Zealand, however, held aloof, the view of Sir Henry Parkes being that a "Council" would impede the way for a sure and solid federation. The Bill introduced by the Earl of Derby in the House of Lords on the 23rd April, 1885, became law on the 14th August as "The Federal Council of Australasia Act 1885." The Council's career however, soon showed that it could not hope to be effective, and it met for the last time in January, 1899.

3. **Formative Stages of the Federal Movement.**—As early as 1878 the necessity for federal defence was vividly brought into Australian consciousness, and arrangements for

naval protection were entered into with the Imperial Government. These were ratified by the Australasian Naval Force Act. Queensland, however, did not come into line until 1891.

Early in 1889, Sir Henry Parkes had confidently suggested to Mr. Duncan Gillies the necessity for a Federal Parliament and Executive. Unable to accept the latter's suggestion that New South Wales should give its adhesion to the Federal Council, the former statesman urged the institution of "a National Convention for the purpose of devising and reporting upon an adequate scheme of Federal Government." This led to the Melbourne Conference of 6th February, 1890. It was at the banquet of this occasion that, in proposing "A United Australasia," Mr. James Service pointed out that the tariff question was "a lion in the path," which federationists must either slay, or by which they must be slain; in the reply to which Sir Henry Parkes made use of his historic phrase, *the crimson thread of kinship runs through us all.* Certain elements of doubt being expressed as to the motives underlying the movement, Sir Henry Parkes said:—"We desire to enter upon this work of Federation without making any condition to the advantage of ourselves, without any stipulation whatever, with a perfect preparedness to leave the proposed convention free to devise its own scheme, and, if a central Parliament comes into existence, with a perfect reliance upon its justice, upon its wisdom, and upon its honour . . . I think . . . an overwhelming majority of my countrymen . . . will approve of the grand step . . . uniting all the colonies under one form of beneficent government, and under one national flag."

The first National Australasian Convention, under Sir Henry Parkes' presidency, was convened on the 2nd March, 1891, all the Australian colonies and New Zealand being represented. The Bill then drafted was considered by the Parliaments of New South Wales, Victoria, South Australia, and Tasmania, but not by those of Queensland, Western Australia, and New Zealand, and though the parliamentary process of dealing with the matter failed, federal sentiment was strengthening. The collapse of the "land boom" had made apparent how intimately the interests of the several colonies were related, and the dangers of disunion became impressively obvious. The Australian Natives' Association took up the federal cause with enthusiasm. Federation leagues were established, the issues were widely and intelligently discussed. The unification scheme of Sir George Dibbs helped to make the issue a real one.

At the Conference of Premiers at Hobart on the 29th January, 1895, it was agreed that Federation "was the great and pressing question of Australian politics," and that "the framing of a Federal Constitution" was an urgent duty. The resuscitation of the whole matter led to the passing of Enabling Acts. In New South Wales, the Act received the Royal assent on the 23rd December, 1895; South Australia anticipated this by three days; the Tasmanian Bill was passed on the 10th January, 1896, the Victorian on the 7th March, 1896; Western Australia fell into line on the 27th October. The "People's Federal Convention," held at Bathurst, N.S.W., in November, 1896, gave a considerable impulse to the movement; to wait longer for Queensland was considered unnecessary, and the 4th March, 1897, was fixed as the date for the election of federal representatives for New South Wales, Victoria, South Australia, and Tasmania. Western Australia followed suit, and on the 22nd March the representatives met at Adelaide.

The discussions made it evident that the federal point of view had advanced considerably. Constitutional, Finance, and Judiciary Committees were appointed, and a Bill was drafted. This, reported to the Convention on the 22nd April, was adopted on the following day, and the Convention adjourned till September. The Parliaments of New South Wales, Victoria, South Australia, Tasmania, and Western Australia discussed the question before the Sydney Session of the Convention, which opened on the 2nd September, 1897. The business of the Convention involved the general reconsideration of the whole Bill, and the consideration of no less than 286 suggested amendments. This work gave a definite character to that of the Melbourne Session of 1898, extending from the 20th January to the 17th March, the necessity for reaching a final decision giving to its deliberations corresponding weight.

4. **Votes on the Question of Federation.**—Eleven weeks after this last convention the first popular vote was taken on Federation in New South Wales, Victoria, South Australia, and Tasmania. Though the decision was overwhelming in favour of Federation in three of the States, and there was a distinct majority in its favour in New South Wales,

the majority was legally insufficient. On the 22nd January, 1899, the Premiers of the six colonies met at Melbourne in a conference initiated by the Right Honourable G. H. Reid, P.C., and seven amendments were made in the Bill. This step virtually effected the solution of the few outstanding difficulties which could in any way be regarded as fundamental.

On the occasion of the second popular vote, Queensland also joined in, and the general majority in favour of Federation was more than doubled, that for New South Wales itself having been more than quadrupled when compared with the first vote. The following table shows the two results :—

VOTES FOR AND AGAINST FEDERATION.

Votes.		N.S.W.	Victoria.	Sth. Aust.	Tas.	Qld.	TOTALS.
1st Vote	For Federation ..	71,595	100,520	35,800	11,797	—	219,712
	Against ,, ..	66,228	22,099	17,320	2,716	—	108,363
	Majority ..	5,367	78,421	18,480	9,081	—	111,349
2nd Vote	For Federation ..	107,420	152,653	65,990	13,437	38,488	377,988
	Against ,, ..	82,741	9,805	17,053	791	30,996	141,386
	Majority ..	24,679	142,848	48,937	12,646	7,492	236,602

5. **Enactment of the Constitution.**—The Secretary of State for the Colonies (the Right Honourable Joseph Chamberlain) expressed the hope on the 22nd December, 1899, that a delegation of the federating colonies would visit England on the occasion of the submission of the Commonwealth Bill to the Imperial Parliament. The delegation consisted of Mr. (later Sir) Edmund Barton (N.S.W.), Mr. Alfred Deakin (Vic.), Mr. C. C. Kingston (S.A.), Sir P. O. Fysh (Tas.), and later Mr. S. H. Parker was appointed delegate for Western Australia, and Mr. W. P. Reeves for New Zealand. After discussion as to whether there should be some modification in the Bill, it was introduced into the House of Commons on the 14th May ; the second reading was moved on the 21st of the same month ; the discussion in committee commenced on the 18th June ; and the Royal assent was given on the 9th July, 1900.

On the 31st July a referendum in Western Australia on the question of federating gave the result :—For, 44,800 ; against, 19,691 ; that is to say, a majority of 25,109 in favour of union. On the 21st August both Houses of Parliament in that State passed addresses praying that it might be included as an original State of the Commonwealth.

On the 17th September, 1900, Her Majesty Queen Victoria signed the proclamation declaring that on and after the first day of January, 1901, the people of New South Wales, Victoria, South Australia, Queensland, Tasmania, and Western Australia should be united in a Federal Commonwealth, under the name of the Commonwealth of Australia.

§ 8. Creation of the Commonwealth.

1. **The Constitution Act.**—The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely, " An Act to constitute the Commonwealth of Australia," as amended by the Constitution Alteration (Senate Elections) Act 1906, and the Constitution Alteration (State Debts) Act 1909 is given *in extenso* hereunder.

THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT,
63 & 64 VICT., CHAPTER. 12.

An Act to constitute the Commonwealth of Australia. [*9th July,* 1900.]

WHEREAS the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established :

And whereas it is expedient to provide for the admission into the Commonwealth of other Australasian Colonies and possessions of the Queen :

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :—

1. This Act may be cited as the Commonwealth of Australia Constitution Act.

2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.

3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation, appoint a Governor-General for the Commonwealth.

4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies, may, at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.

5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State ; and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.

6. " The Commonwealth " shall mean the Commonwealth of Australia as established under this Act.

" The States " shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States : and each of such parts of the Commonwealth shall be called " a State."

" Original States " shall mean such States as are parts of the Commonwealth at its establishment.

7. The Federal Council of Australasia Act, 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.

Any such law may be repealed as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

8. After the passing of this Act the Colonial Boundaries Act 1895 shall not apply to any colony which becomes a State of the Commonwealth ; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.

9. The Constitution of the Commonwealth shall be as follows :—

THE CONSTITUTION.

This Constitution is divided as follows :—

Chapter I.—The Parliament :
  Part I.—General :
  Part II.—The Senate :
  Part III.—The House of Representatives :
  Part IV.—Both Houses of the Parliament :
  Part V.—Powers of the Parliament :
Chapter II.—The Executive Government :
Chapter III.—The Judicature :
Chapter IV.—Finance and Trade :
Chapter V.—The States :
Chapter VI.—New States :
Chapter VII.—Miscellaneous :
Chapter VIII.—Alteration of the Constitution.
The Schedule.

CHAPTER I.—THE PARLIAMENT.

PART I.—GENERAL.

1. The legislative power of the Commonwealth shall be vested in a Federal Parliament which shall consist of the Queen, a Senate, and a House of Representatives, and which is hereinafter called "The Parliament," or "The Parliament of the Commonwealth."

2. A Governor-General appointed by the Queen shall be Her Majesty's representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen's pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.

3. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of a Governor-General shall not be altered during his continuance in office.

4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.

5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise, prorogue the Parliament, and may in like manner dissolve the House of Representatives.

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

PART II.—THE SENATE.

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division, and in the absence of such provision the State shall be one electorate.

Until the Parliament otherwise provides there shall be six senators for each Original State. The Parliament may make laws increasing or diminishing the number of senators for each State, but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified by the Governor to the Governor-General.

8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only once.

9. The Parliament of the Commonwealth may make laws prescribing the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws prescribing the method of choosing the senators for that State.

The Parliament of a State may make laws for determining the times and places of elections of senators for the State.

10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.

11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate.

12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.

13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in number as practicable; and the places of the senators of the first class shall become vacant at the expiration of [the third year] *three years*,* and the places of those of the second class at the expiration of [the sixth year] *six years*,* from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made [in the year at the expiration of which] *within one year before** the places are to become vacant.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of [January] *July** following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of [January] *July** preceding the day of his election.

14. Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places of senators for the State as it deems necessary to maintain regularity in the rotation.

15. If the place of a senator becomes vacant before the expiration of his term of service, the Houses of Parliament of the State for which he was chosen shall, sitting and voting together, choose a person to hold the place until the expiration of the term, or until the election of a successor as hereinafter provided, whichever first happens. But if the Houses of Parliament of the State are not in session at the time when the vacancy is notified, the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State, or until the election of a successor, whichever first happens.

At the next general election of members of the House of Representatives, or at the next election of senators for the State, whichever first happens, a successor shall, if the term has not then expired, be chosen to hold the place from the date of his election until the expiration of the term.

The name of any senator so chosen or appointed shall be certified by the Governor of the State to the Governor-General.

16. The qualifications of a senator shall be the same as those of a member of the House of Representatives.

17. The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

18. Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.

19. A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

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* As amended by section 2 of the Constitution Alteration (Senate Elections) 1906. The words in square brackets have been repealed; amendments are shown in italics.

20. The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.

21. Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth, the Governor-General, shall notify the same to the Governor of the State in the representation of which the vacancy has happened.

22. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.

23. Questions arising in the Senate shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

PART III.—THE HOUSE OF REPRESENTATIVES.

24. The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner:—

(i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators:

(ii) The number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota; and if on such division there is a remainder greater than one-half of the quota, one more member shall be chosen in the State.

But notwithstanding anything in this section, five members at least shall be chosen in each Original State.

25. For the purposes of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.

26. Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows:—

New South Wales ..	23	South Australia ..	6
Victoria	20	Tasmania	5
Queensland	8		

Provided that if Western Australia is an Original State, the numbers shall be as follows:—

New South Wales ..	26	South Australia ..	7
Victoria	23	Western Australia ..	5
Queensland	9	Tasmania	5

27. Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.

28. Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.

29. Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws for determining the divisions in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provisions, each State shall be one electorate.

30 Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State; but in the choosing of members each elector shall vote only once.*

31. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.

32. The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.

After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.

33. Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.

34. Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows:—

- (i) He must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen:
- (ii) He must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom or of a Colony which has become or becomes a State, or of the Commonwealth, or of a State.

35. The House of Representatives shall, before proceeding to the despatch of any other business, choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

36. Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

37. A member may by writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

38. The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House.

39. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.

40. Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

PART IV.—BOTH HOUSES OF THE PARLIAMENT.

41. No adult person who has or acquires a right to vote at elections for the more numerous Houses of the Parliament of a State shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.

42. Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorized by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.

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* The franchise qualification was determined by the Commonwealth Franchise Act 1902.

43. A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

44. Any person who—

(i) Is under any acknowledgment of allegiance, obedience, or adherence to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power: or

(ii) Is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer: or

(iii) Is an undischarged bankrupt or insolvent: or

(iv) Holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth: or

(v) Has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons:

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section iv. does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half-pay, or a pension by any person as an officer or member of the Queen's navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth.

45. If a senator or member of the House of Representatives—

(i) Becomes subject to any of the disabilities mentioned in the last preceding section: or

(ii) Takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors: or

(iii) Directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State:

his place shall thereupon become vacant.

46. Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

47. Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House, shall be determined by the House in which the question arises.

48. Until the Parliament otherwise provides, each senator and each member of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.*

49. The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom, and of its members and committees, at the establishment of the Commonwealth.

50. Each House of the Parliament may make rules and orders with respect to—

(i) The mode in which its powers, privileges, and immunities may be exercised and upheld:

(ii) The order and conduct of its business and proceedings either separately or jointly with the other House.

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* By the Parliamentary Allowances Act 1907, the amount of the allowance was increased to £600 a year; and by the Parliamentary Allowances Act 1920 to £1,000 a year. (The latter Act also apportioned special allowances to the President of the Senate; the Speaker of the House of Representatives; the Chairmen of Committees in both Houses; and the Opposition Leaders in both Houses.)

PART V.—POWERS OF THE PARLIAMENT.*

51. The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to—

(i) Trade and commerce with other countries, and among the States:
(ii) Taxation: but so as not to discriminate between States or parts of States:
(iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth:
(iv) Borrowing money on the public credit of the Commonwealth:
(v) Postal, telegraphic, telephonic, and other like services:
(vi) The naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth:
(vii) Lighthouses, lightships, beacons and buoys:
(viii) Astronomical and meteorological observations:
(ix) Quarantine:
(x) Fisheries in Australian waters beyond territorial limits:
(xi) Census and statistics:
(xii) Currency, coinage, and legal tender:
(xiii) Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money:
(xiv) Insurance, other than State insurance: also State insurance extending beyond the limits of the State concerned:
(xv) Weights and measures:
(xvi) Bills of exchange and promissory notes:
(xvii) Bankruptcy and insolvency:
(xviii) Copyrights, patents of inventions and designs, and trade marks:
(xix) Naturalization and aliens:
(xx) Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth:
(xxi) Marriage:
(xxii) Divorce and matrimonial causes; and in relation thereto, parental rights, and the custody and guardianship of infants:
(xxiii) Invalid and old-age pensions:
(xxiv) The service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States:
(xxv) The recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States:
(xxvi) The people of any race, other than the aboriginal race in any State, for whom it is deemed necessary to make special laws:
(xxvii) Immigration and emigration:
(xxviii) The influx of criminals:
(xxix) External affairs:
(xxx) The relations of the Commonwealth with the islands of the Pacific:
(xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws:
(xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth:
(xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State:
(xxxiv) Railway construction and extension in any State with the consent of that State:
(xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State:
(xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides:

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* Particulars of proposed laws which were submitted to referenda are given in Chapter III., General Government.

(xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law:

(xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia:

(xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth.

52. The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace, order, and good government of the Commonwealth, with respect to—

(i) The seat of Government of the Commonwealth, and all places acquired by the Commonwealth for public purposes:

(ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth:

(iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.

53. Proposed laws appropriating revenue or moneys, or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties, or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.

The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.

The Senate may not amend any proposed laws so as to increase any proposed charge or burden on the people.

The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.

Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.

54. The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.

55. Laws imposing taxation shall deal only with the imposition of taxation, and any provisions therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.

56. A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.

57. If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of the expiry of the House of Representatives by effluxion of time.

If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and of the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by an absolute majority of the total number of members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

58. When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent, he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

The Governor-General may return to the House in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendation.

59. The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.

60. A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of the Parliament, or by Proclamation, that it has received the Queen's assent.

CHAPTER II.—THE EXECUTIVE GOVERNMENT.

61. The executive power of the Commonwealth is vested in the Queen and is exerciseable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.

62. There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.

63. The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.

64. The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

65. Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.*

66. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.*

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* By the Ministers of State Acts 1915 and 1917, the Ministers of State may exceed seven, but shall not exceed nine. £15,300 annually was allotted by these Acts for their salaries; and £800 per annum each was added by the Parliamentary Allowances Act 1920.

67. Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.

68. The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

69. On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth :—

Posts, telegraphs, and telephones :
Naval and military defence :
Lighthouses, lightships, beacons, and buoys :
Quarantine.

But the departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

70. In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of his Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

CHAPTER III.—THE JUDICATURE.

71. The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.

72. The Justices of the High Court and of the other Courts created by the Parliament—

(i) Shall be appointed by the Governor-General in Council :
(ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity ;
(iii) Shall receive such remuneration as the Parliament may fix ; but the remuneration shall not be diminished during their continuance in office.

73. The High Court shall have jurisdiction, with such exceptions and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments, decrees, orders, and sentences—

(i) Of any Justice or Justices exercising the original jurisdiction of the High Court :
(ii) Of any other federal court, or court exercising federal jurisdiction ; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council :
(iii) Of the Inter-State Commission, but as to questions of law only :

and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme Court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

74. No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits inter se of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits inter se of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave.

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to Her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked, but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

75. In all matters—

(i) Arising any under treaty:
(ii) Affecting consuls or other representatives of other countries;
(iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party:
(iv) Between States, or between residents of different States, or between a State and a resident of another State:
(v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth:

the High Court shall have original jurisdiction.

76. The Parliament may make laws conferring original jurisdiction on the High Court in any matter—

(i) Arising under this Constitution, or involving its interpretation:
(ii) Arising under any laws made by the Parliament:
(iii) Of Admiralty and maritime jurisdiction:
(iv) Relating to the same subject-matter claimed under the laws of different States.

77. With respect to any of the matters mentioned in the last two sections the Parliament may make laws—

(i) Defining the jurisdiction of any federal court other than the High Court:
(ii) Defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States:
(iii) Investing any court of a State with federal jurisdiction.

78. The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.

79. The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.

80. The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

CHAPTER IV.—FINANCE AND TRADE.

81. All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.

82. The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon; and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.

83. No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

84. When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State, be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth; but the State shall pay to the Commonwealth a part thereof, to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if he had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.

85. When any department of the public service of a State is transferred to the Commonwealth—

(i) All property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth, but, in the case of the departments controlling customs and excise and bounties, for such time only as the Governor-General in Council may declare to be necessary:

(ii) The Commonwealth may acquire any property of the State, of any kind used, but not exclusively used in connexion with the department; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the State in force at the establishment of the Commonwealth:

(iii) The Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section: if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament:

(iv) The Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.

86. On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.

87. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

88. Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.

89. Until the imposition of uniform duties of customs—

(i) The Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.

(ii) The Commonwealth shall debit to each State—

(*a*) The expenditure therein of the Commonwealth occurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth;

(*b*) The proportion of the State according to the number of its people, in the other expenditure of the Commonwealth.

(iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.

90. On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant of or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

91. Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid to or bounty on the production or export of goods.

92. On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two years after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

93. During the first five years after the imposition of uniform duties of customs and thereafter until the Parliament otherwise provides—

(i) The duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State:

(ii) Subject to the last sub-section, the Commonwealth, shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

94. After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair, for the monthly payment to the several States of all surplus revenue of the Commonwealth.

95. Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported from beyond the limits of the Commonwealth; and such duties shall be collected by the Commonwealth

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three-fifths, two-fifths, and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

96. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

97. Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned whenever the Colony, or the Government or an officer of the Colony, is mentioned.

98. The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

99. The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.

100. The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

101. There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.*

102. The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under a State, if such preference or discrimination is undue and unreasonable, or unjust to any State ; due regard being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

103. The members of the Inter-State Commission—

(i) Shall be appointed by the Governor-General in Council :

(ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity :

(iii) Shall receive such remuneration as the Parliament may fix ; but such remuneration shall not be diminished during their continuance in office.

104. Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State, and if the rate applies equally to goods within the State and to goods passing into the State from other States.

105. The Parliament may take over from the States their public debts [as existing at the establishment of the Commonwealth],† or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof ; and the State shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.

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* The Commission was brought into existence in 1913, under Act No. 33 of 1912, by the appointment of Commissioners for seven years. When this period expired no fresh appointments were made.

† Under section 2 of the Constitution Alteration (State Debts) 1909, the words in square brackets are omitted.

CHAPTER V.—THE STATES.

106. The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.

107. Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be.

108. Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State; and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.

109. When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

110. The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.

111. The Parliament of a State may surrender any part of the State to the Commonwealth; and upon such surrender and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.

112. After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the net produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth.

113. All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale, or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.

114. A State shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.

115. A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.

116. The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.

117. A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.

118. Full faith and credit shall be given, throughout the Commonwealth, to the laws, the public Acts and records, and the judicial proceedings of every State.

119. The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.

120. Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.

CHAPTER VI.—NEW STATES.

121. The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.

122. The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.

123. The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

124. A new State may be formed by separation of territory from a State, but only with consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the parliaments of the States affected.

CHAPTER VII.—MISCELLANEOUS.

125. The seat of Government of the Commonwealth shall be determined by the Parliament, and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.

Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the seat of Government.

126. The Queen may authorize the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen; but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

127. In reckoning the numbers of the people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted.

CHAPTER VIII.—ALTERATION OF THE CONSTITUTION.

128. This Constitution shall not be altered except in the following manner:—

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

SCHEDULE.

OATH.

I, *A.B.*, do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. SO HELP ME GOD!

AFFIRMATION.

I, *A.B.*, do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law.

(NOTE.—*The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.*)

2. **The Royal Proclamation.**—The preceding Act received the Royal assent on the 9th July, 1900. This made it lawful to declare that the people of Australia should be united in a Federal Commonwealth. This proclamation, made on the 17th September, 1900, constituted the Commonwealth as from the 1st January, 1901: it reads as follows:—

BY THE QUEEN.

A PROCLAMATION.

(Signed) VICTORIA R.

WHEREAS by an Act of Parliament passed in the Sixty-third and Sixty-fourth Years of Our Reign, intituled "An Act to constitute the Commonwealth of *Australia*," it is enacted that it shall be lawful for the Queen, with the advice of the Privy Council, to declare by Proclamation, that, on and after a day therein appointed, not being later than One year after the passing of this Act, the people of *New South Wales*, *Victoria*, *South Australia*, *Queensland*, and *Tasmania*, and also, if Her Majesty is satisfied that the people of *Western Australia* have agreed thereto, of *Western Australia*, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia.

And whereas We are satisfied that the people of *Western Australia* have agreed thereto accordingly.

We therefore, by and with the advice of Our Privy Council, have thought fit to issue this Our Royal Proclamation, and We do hereby declare that on and after the First day of *January* One thousand nine hundred and one, the people of *New South Wales*, *Victoria*, *South Australia*, *Queensland*, *Tasmania*, and *Western Australia* shall be united in a Federal Commonwealth under the name of the Commonwealth of *Australia*.

Given at Our Court at *Balmoral* this Seventeenth day of *September*, in the Year of Our Lord One thousand nine hundred, and in the Sixty-fourth Year of Our Reign.

GOD SAVE THE QUEEN.

§ 9. Commonwealth Administration and Legislation.

1. The Commonwealth Parliaments.—The first Parliament of the Commonwealth was convened by proclamation dated 29th April, 1901, by His Excellency the late Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on the 9th May following by H.R.H. the Duke of Cornwall and York, who had been sent to Australia for that purpose by His Majesty the King; the Rt. Hon. Sir Edmund Barton, P.C., G.C.M.G., K.C., being Prime Minister.

The following table gives the number and duration of Parliaments since Federation :—

COMMONWEALTH PARLIAMENTS, 1901 TO 1926.

Number of Parliament.	Date of Opening.	Date of Dissolution.
First	29th April, 1901	23rd November, 1903
Second	2nd March, 1904	12th October, 1906
Third	20th February, 1907	19th February, 1910
Fourth	1st July, 1910	23rd April, 1913
Fifth	9th July, 1913	30th July, 1914 (*a*)
Sixth	8th October, 1914	26th March, 1917
Seventh	14th June, 1917	3rd November, 1919
Eight	26th February, 1920	6th November, 1922
Ninth	28th February, 1923	3rd October, 1925
Tenth	13th January, 1926	

(*a*) On this occasion the Governor-General, acting on the advice of the Ministry, and under section 57 of the Constitution, granted a dissolution of both the Senate and the House of Representatives, this being the first occasion since Federation on which a dissolution of both Houses had occurred.

2. Governors-General and Ministries.—The following statements show the names of the several Governors-General, and the Ministries which have directed the administration of the affairs of the Commonwealth since its creation :—

(*a*) Governors-General.

Rt. Hon. Earl of Hopetoun (afterwards Marquis of Linlithgow), P.C., K.T., G.C.M.G., G.C.V.O Sworn 1st January, 1901; recalled 9th May, 1902.

Rt. Hon. Hallam Baron Tennyson, G.C.M.G. (Act. Governor-General). Sworn 17th July, 1902.

Rt. Hon. Hallam Baron Tennyson, G.C.M.G. (Governor-General). Sworn 9th January, 1903; recalled 21st January, 1904.

Rt. Hon. Henry Stafford Baron Northcote, P.C., G.C.M.G., G.C.I.E., C.B. Sworn 21st January, 1904; recalled 8th September, 1908.

Rt. Hon. William Humble Earl of Dudley, P.C., G.C.M.G., G.C.V.O., etc. Sworn 9th September, 1908; recalled 31st July, 1911.

Rt. Hon. Thomas Baron Denman, P.C., G.C.M.G., K.C.V.O. Sworn 31st July, 1911; recalled 16th May, 1914.

Rt. Hon. Sir Ronald Craufurd Munro Ferguson (afterwards Viscount Novar of Raith), P.C. G.C.M.G. Sworn 18th May, 1914; recalled 5th October, 1920.

Rt. Hon. Henry William Baron Forster of Lepe, P.C., G.C.M.G. Sworn 6th October, 1920; recalled 7th October, 1925.

Rt. Hon. John Lawrence Baron Stonehaven, P.C., G.C.M.G., D.S.O. Sworn 8th October, 1925.

(*b*) Ministries.

(i) Barton Government, 1st January, 1901, to 23rd September, 1903.

(ii) First Deakin Government, 23rd September, 1903, to 26th April, 1904.

(iii) Watson Government, 26th April to 17th August, 1904.

(iv) Reid-McLean Government, 17th August, 1904, to 4th July, 1905.

(v) Second Deakin Government, 4th July, 1905, to 12th November, 1908.

(vi) First Fisher Government, 12th November, 1908, to 2nd June, 1909.

(vii) Third Deakin Government, 2nd June, 1909, to 29th April, 1910.

(viii) Second Fisher Government, 29th April, 1910, to 24th June, 1913.

(ix) Cook Government, 24th June, 1913, to 17th September, 1914.

(x) Third Fisher Government, 17th September, 1914, to 27th October, 1915.

(xi) First Hughes Government, 27th October, 1915, to 14th November, 1916.

(xii) Second Hughes Government, 14th November, 1916, to 17th February, 1917.

(xiii) Australian National War Government, 17th February, 1917, to 10th January, 1918.

(xiv) Australian National War Government, 10th January, 1918, to 9th February, 1923.

(*c*) BRUCE-PAGE GOVERNMENT from 9th February, 1923.

DEPARTMENTS.	MINISTERS.
Prime Minister and Minister for External Affairs	Rt. Hon. STANLEY MELBOURNE BRUCE, P.C., M.C.
Treasurer	Hon. EARLE CHRISTMAS GRAFTON PAGE.
Minister for Home and Territories	Rt. Hon. GEORGE FOSTER PEARCE, P.C.
Attorney-General	Hon. SIR LITTLETON ERNEST GROOM, K.C.M.G. K.C. (to 18/12/'25) Hon. JOHN GREIG LATHAM, C.M.G., K.C. (from 18/12/'25).
Postmaster-General	Hon. WILLIAM GERRAND GIBSON.
Minister for Trade and Customs	Hon. AUSTIN CHAPMAN (to 26/5/'24). Hon. HERBERT EDWARD PRATTEN (from 13/6/'24).
Minister for Works and Railways	Hon. PERCY GERALD STEWART (to 5/8/'24). Hon. WILLIAM CALDWELL HILL (from 26/9/'24).
Minister for Defence	Hon. ERIC KENDALL BOWDEN (to 16/1/'25). Hon. SIR NEVILLE REGINALD HOWSE, V.C., K.C.B., K.C.M.G. (from 16/1/'25).
Minister for Health	Hon. SIR AUSTIN CHAPMAN, K.C.M.G. (to 26/5/'24). Hon. HERBERT EDWARD PRATTEN (from 13/6/'24 to 16/1/'25). Hon. SIR NEVILLE REGINALD HOWSE, V.C., K.C.B., K.C.M.G. (from 16/1/'25).
Minister for Markets and Migration	Hon. SIR REGINALD VICTOR WILSON* (from 16/1/'25).
Vice-President of the Executive Council	Hon. LLEWELYN ATKINSON.
Honorary Ministers	Hon. REGINALD VICTOR WILSON (to 16/1/'25). Hon. THOMAS WILLIAM CRAWFORD. Hon. CHARLES WILLIAM CLANAN MARR, D.S.O., M.C., V.D. (from 16/1/'25).

3. **State Ministries.**—The names of the members of the Ministries in each State in May, 1926, are shown in the following statement :—

STATE MINISTRIES, 1926.

NEW SOUTH WALES.

Premier and Colonial Treasurer—
HON. J. T. LANG.

Secretary for Lands and Minister for Forests—
HON. P. F. LOUGHLIN.

Secretary for Mines and Minister for Labour and Industry—
HON. J. M. BADDELEY.

Attorney-General—
HON. E. A. MCTIERNAN.

Minister for Agriculture—
HON. W. F. DUNN.

Minister of Justice and Assistant Colonial Treasurer—
HON. W. J. MCKELL.

Minister of Public Instruction—
HON. T. D. MUTCH.

Colonial Secretary—
HON. C. C. LAZZARINI.

Minister for Public Health—
HON. G. CANN.

Secretary for Public Works and Minister for Railways—
HON. M. M. FLANNERY.

Minister for Local Government—
HON. J. J. FITZGERALD.

Vice-President of the Executive Council—
HON. A. C. WILLIS, M.L.C.

Honorary Minister—
HON. J. F. COATES, M.L.C.

VICTORIA.

Premier and Minister of Water Supply—
HON. J. ALLAN.

Treasurer and Minister of Public Instruction and of Labour—
HON. SIR A. J. PEACOCK, K.C.M.G.

Chief Secretary and Minister of Public Health—
HON. S. S. ARGYLE.

Commissioner of Crown Lands and Survey and Minister of Immigration—
HON. A. DOWNWARD.

Attorney-General and Solicitor-General and Minister of Railways—
HON. F. W. EGGLESTON.

Commissioner of Public Works and Minister of Mines—
HON. G. L. GOUDIE, M.L.C.

Minister of Forests—
HON. H. F. RICHARDSON, M.L.C.

Minister of Agriculture and Minister of Markets—
COLONEL THE HON. M. W. J. BOURCHIER, C.M.G., D.S.O., V.D.

Ministers without Portfolio—
HON. J. R. HARRIS, M.L.C.
HON. M. MCGREGOR, M.L.C.
HON. J. MCDONALD.
HON. E. J. MACKRELL.

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* K.B.E., 1926.

QUEENSLAND.

Premier, Vice-President of the Executive Council, Chief Secretary, and Treasurer—
Hon. W. McCormack.

Secretary for Agriculture and Stock—
Hon. W. F. Smith.

Secretary for Mines—
Hon. A. J. Jones.

Secretary for Railways—
Hon. J. Larcombe.

Attorney-General—
Hon. J. Mullan.

Secretary for Public Instruction—
Hon. T. Wilson.

Home Secretary—
Hon. J. Stopford.

Secretary for Public Lands—
Hon. T. Dunstan.

Secretary for Public Works—
Hon. M. J. Kirwan.

Minister without Portfolio—
Hon. D. A. Gladson.

SOUTH AUSTRALIA.

Premier, Treasurer, Minister of Railways—
Hon. J. Gunn.

Chief Secretary—
Hon. J. Jelley, M.L.C.

Attorney-General and Minister of Housing and of Irrigation and of Repatriation—
Hon. W. J. Denny.

Commissioner of Crown Lands and Minister of Agriculture—
Hon. T. Butterfield.

Minister of Mines and of Marine and of Immigration and of Local Government—
Hon. A. A. Kirkpatrick, M.L.C.

Commissioner of Public Works, Minister of Education and of Industry—
Hon. L. L. Hill.

WESTERN AUSTRALIA.

Premier, Treasurer, and Minister for Forests—
Hon. P. Collier.

Minister for Lands, Immigration, and Industry—
Hon. W. C. Angwin.

Chief Secretary and Minister for Education, Health, and the North-West—
Hon. J. M. Drew, M.L.C.

Minister for Public Works, Water Supply, Labour, and Trading Concerns—
Hon. A. McCallum.

Minister for Mines, and Agriculture—
Hon. M. F. Troy.

Minister for Railways, Justice, and Police—
Hon. J. C. Willcock.

Ministers without Portfolio—
Hon. S. W. Munsie.
Hon. J. Cunningham.
Hon. J. W. Hickey, M.L.C.

TASMANIA.

Premier and Treasurer and Minister for Mines—
Hon. J. A. Lyons.

Attorney-General and Minister for Education and Forestry—
Hon. A. G. Ogilvie.

Chief Secretary and Minister for Railways—
Hon. J. A. Guy.

Minister for Lands, Works, and Agriculture—
Hon. J. A. Belton.

Ministers without Portfolio—
Hon. A. Lawson, M.L.C.
Hon. G. G. Becker.

4. **The Course of Legislation.**—The actual legislation by the Commonwealth Parliament up to the end of the 1925 session is indicated in alphabetical order in "Vol. XXIII. of the Acts of the Parliament of the Commonwealth of Australia, passed during the year 1925, with Tables, Appendix, and Indexes." A "Chronological Table of Acts passed

from 1901 to 1925, showing how they are affected by subsequent legislation or lapse of time " is also given, and further "A Table of Commonwealth Legislation," for the same period, " in relation to the several provisions of the Constitution," is furnished. Reference may be made to these for complete information. The nature of Commonwealth legislation up to December, 1925, and its relation to the several provisions of the Constitution, are set forth in the following tabular statement, from which have been omitted Acts repealed or no longer in force :—

COMMONWEALTH LEGISLATION—ANALYTIC TABLE.*

Section of Constitution.	Short Title of Commonwealth Act.
	AMENDMENT OF THE CONSTITUTION.
	Constitution Alteration (Senate Elections) 1906.
	Constitution Alteration (State Debts) 1909.
	PARLIAMENTARY AND ELECTORAL LAW.
8—30	PARLIAMENTARY FRANCHISE—
	Commonwealth Electoral Act 1918–1925.
9—34	ELECTIONS—
	Commonwealth Electoral Act 1902–1911.†
	Commonwealth Electoral Act 1918–1925.
	Senate Elections Act 1903–1922.
24	DETERMINATION OF NUMBER OF MEMBERS OF HOUSE OF REPRESENTATIVES—
	Representation Act 1905.
	Northern Territory Representation Act 1922–1925.
47	DISPUTED ELECTIONS AND QUALIFICATIONS—
	Commonwealth Electoral Act 1918–1925 (ss. 183–201).
48	ALLOWANCES TO MEMBERS—
	Parliamentary Allowances Act 1920
	Northern Territory Representation Act 1922–1925 (s. 6).
49	PRIVILEGES OF PARLIAMENT—
	Parliamentary Papers Act 1908.
	GENERAL LEGISLATION.
51 (i)	TRADE AND COMMERCE—EXTERNAL AND INTERSTATE—
	Australian Industries Preservation Act 1906–1910 [*Trusts and Dumping*].
	Commerce (Trade Descriptions) Act 1905.
	Commonwealth Shipping Act 1923.
	Customs Act 1901–1925.
	Dairy Produce Export Control Act 1924.
	Dried Fruits Export Control Act 1924.
	Enemy Contracts Annulment Act 1915.
	Export Guarantee Act 1924–1925.
	Immigration Act 1901–1925 (ss. 8AA, 8AB).
	Inter-state Commission Act 1912.
	Meat Industry Encouragement Act 1924.
	Navigation Act 1912–1925.
	Norfolk Island Act 1913 (s. 15).
	Northern Territory Acceptance Act 1910–1919 (s. 13).
	River Murray Waters Act 1915–1923.
	Sea-Carriage of Goods Act 1924 [*Bills of Lading*].
	Seamen's Compensation Act 1911.
	Secret Commissions Act 1905.
	Spirits Act 1906–1923.
	Trading with the Enemy Act 1914–1921.
	War Precautions Act Repeal Act 1920–1923.

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* This table has been prepared by Sir Robert Garran, Solicitor-General of the Commonwealth.

† With the exception of s. 210 of the *Commonwealth Electoral Act* 1902, and s. 18 of the *Commonwealth Electoral Act* 1905, the *Commonwealth Electoral Act* 1902–1911 has been repealed by the *Commonwealth Electoral Act* 1918. See *Commonwealth Gazette*, 25th November, 1918, p. 2257, 21st March, 1919, p. 401, and 14th November, 1920, p. 2277.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION—*continued.*
51 (ii)	Taxation—
	Machinery Acts—
	Beer Excise Act 1901–1923.
	Customs Act 1901–1925.
	Distillation Act 1901–1925.
	Entertainment Tax Assessment Act 1916–1924.
	Estate Duty Assessment Act 1914–1922.
	Excise Act 1901–1923.
	Excise Procedure Act 1907.
	Income Tax Assessment Act 1922–1925.
	Income Tax Assessment (Live Stock) Act 1924.
	Income Tax Collection Act 1923–1924.
	Land Tax Assessment Act 1910–1924.
	New Zealand Re-exports Act 1924.
	Spirits Act 1906–1923.
	Taxation of Loans Act 1923.
	War-time Profits Tax Assessment Act 1917–1924.
	Taxing Acts—
	Customs Tariff 1902 [*Section 5 and Schedule repealed by Customs Tariff* 1908].
	Customs Tariff 1921–1924.
	Customs Tariff (Industries Preservation) Act 1921–1922.
	Customs Tariff (New Zealand Preference) 1922.
	Customs Tariff (New Zealand Preference) 1922 (No. 2).
	Customs Tariff (South African Preference) 1906 ; affected by *Customs Tariff* 1908 (s. 9)* and by *Customs Tariff* 1921–1924 (s. 15).
	Customs Tariff (Sugar) 1922.
	Customs Tariff Validation Acts 1917 and 1919 ; affected by *Customs Tariff* 1921 (s. 12 (2)).
	Customs Tariff Validation Act 1925.
	Dairy Produce Export Charges Act 1924.
	Dried Fruits Export Charges Act 1924.
	Entertainments Tax Act 1916–1925.
	Estate Duty Act 1914.
	Excise Tariff 1902 ; amended by *Sugar Rebate Abolition Act* 1903, *Excise Tariff* 1905*, *Excise Tariff* (*Amendment*) 1906*, *Excise Tariff* 1908*, and *Excise* (*Sugar*) 1910.*
	Excise Tariff 1921–1924.
	Income Tax Acts 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925.
	Land Tax Act 1910–1922.
	War-time Profits Tax Act 1917.
(iii)	Bounties on Production or Export—
	*Canned Fruit Export Bounty Act 1924.**
	*Cattle Export Bounty Act 1924.**
	Iron and Steel Products Bounty Act 1922.
	Shale Oil Bounty Act 1917–1923.
	Sulphur Bounty Act 1923.
	Wine Export Bounty Act 1924.
(iv)	Borrowing Money on the Public Credit of the Commonwealth—
	Audit Act 1901–1924 (ss. 55–59).
	Commonwealth Bank Act 1911–1925 (ss. 10, 53–58, 60ABE–60ABG).
	Commonwealth Inscribed Stock Act 1911–1918.
	Funding Arrangements Act 1921.
	Grafton to South Brisbane Railway Act 1924.
	Immigration Loan Act 1922.
	Loan Act 1911–1914 ; 1912–1914 ; 1913–1914 ; 1914 ; (No. 2) 1914–1915 ; 1918 ; 1919 ; 1920 ; 1921 ; (No. 2) 1921 ; 1922 ; 1923 ; (No. 1) 1924 ; (No. 2) 1924 ; (No. 3) 1924 ; (No. 1) 1925 ; (No. 2) 1925.
	Loans Redemption and Conversion Act 1921.
	Loans Securities Act 1919.
	National Debt Sinking Fund Act 1923–1925.

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* Acts whose short titles are printed in italics with a * have been repealed or have expired.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION—*continued.*
	BORROWING MONEY ON THE PUBLIC CREDIT OF THE COMMONWEALTH—*continued.*
51 (iv)	Oil Agreement Act 1924.
	Repatriation Loan Act 1921.
	Seat of Government (Administration) Act 1924 (s. 20).
	States Loan Act 1916 ; 1917 ; 1924 ; 1925.
	Sugar Purchase Act 1915–1920.
	Tasmanian Loan Redemption Act 1919.
	Taxation of Loans Act 1923.
	Treasury Bills Act 1914–1915.
	War Gratuity Acts 1920 (ss. 11, 13).
	War Loan Act (No. 1) 1915 ; (No. 3) 1915 ; (No. 1) 1916 ; 1917 ; 1918 ; 1920.
	War Loan (United Kingdom) Act 1914–1917 ; 1915–1917 ; (No. 2) 1916.
	War Loan Securities Repurchase Act 1918.
(v)	POSTAL, TELEGRAPHIC, AND TELEPHONIC SERVICES—
	Commonwealth Electoral Act 1918–1925 (ss. 212, 213).
	Pacific Cable Act 1911.
	Post and Telegraph Act 1901–1923.
	Post and Telegraph Rates Act 1902–1924.
	Purchase Telephone Lines Acquisition Act 1911.
	Telegraph Act 1909.
	Wireless Agreement Act 1924.
	Wireless Telegraphy Act 1905–1919.
(vi)	NAVAL AND MILITARY DEFENCE—
	General—
	Air Force Act 1923.
	Control of Naval Waters Act 1918.
	Deceased Soldiers' Estates Act 1918–1919.
	Defence Act 1903–1918.
	Defence Equipment Act 1924.
	Defence Lands Purchase Act 1913.
	Defence Retirement Act 1922.
	Naval Agreement Act 1903–1912.
	Naval Defence Act 1910–1918.
	Telegraph Act 1909.
	War Legislation—
	Australian Imperial Force Canteens Fund Act 1920.
	Australian Soldiers' Repatriation Act 1920–1922.
	Australian War Memorial Act 1925.
	Enemy Contracts Annulment Act 1915.
	Legal Proceedings Control Act 1919.
	Moratorium Act 1919.
	Termination of the Present War (Definition) Act 1919.
	Trading with the Enemy Act 1914–1921.
	Treaties of Peace (Austria and Bulgaria) Act 1920.
	Treaties of Washington Act 1922.
	Treaty of Peace (Germany) Act 1919–1920.
	Treaty of Peace (Hungary) Act 1921.
	War Gratuity Acts 1920.
	War Precautions Act Repeal Act 1920–1923.
	War Service Homes Act 1918–1925.
	War Service Homes Commission Validating Act 1921.
	Wheat Storage Act 1917.
(vii)	LIGHTHOUSES, LIGHTSHIPS, BEACONS AND BUOYS—
	Lighthouses Act 1911–1919.
(viii)	ASTRONOMICAL AND METEOROLOGICAL OBSERVATIONS—
	Meteorology Act 1906.
(ix)	QUARANTINE—
	Quarantine Act 1908–1924.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION—*continued.*
51 (xi)	Census and Statistics—
	Census and Statistics Act 1905–1920.
	Statistical Bureau (Tasmania) Act 1924.
(xii)	Currency, Coinage, and Legal Tender—
	Coinage Act 1909.
	Commonwealth Bank Act 1911–1925 (ss. 60A–60AB).
(xiii)	Banking, other than State Banking, Etc.—
	Commonwealth Bank Act 1911–1925.
(xiv)	Insurance—
	Life Assurance Companies Act 1905.
	Marine Insurance Act 1909.
(xvi)	Bills of Exchange and Promissory Notes—
	Bills of Exchange Act 1909–1912.
	Commonwealth Bank Act 1911–1925 (s. 29 (*a*)).
(xvii)	Bankruptcy and Insolvency—
	Bankruptcy Act 1924.
(xviii)	Copyright, Patents, Designs and Trade Marks—
	Boy Scouts Association Act 1924 (s. 3).
	Copyright Act 1912.
	Customs Act 1901–1925 (s. 52 (*a*), 57).
	Designs Act 1906–1912.
	Patents Act 1903–1921.
	Patents, Trade Marks, and Designs Act 1910.
	Trade Marks Act 1905–1922.
(xix)	Naturalization and Aliens—
	Aliens Registration Act 1920.
	Immigration Act 1901–1925.
	Nationality Act 1920–1925.
	War Precautions Act Repeal Act 1920–1923 (s. 8).
(xx)	Corporations—
	Boy Scouts Association Act 1924.
(xxiii)	Invalid and Old-age Pensions—
	Invalid and Old-age Pensions Act 1908–1925.
(xxiv)	Service and Execution throughout Commonwealth of Process and Judgments of State Courts—
	Service and Execution of Process Act 1901–1924.
(xxv)	Recognition of State Laws, Records, Etc.—
	State Laws and Records Recognition Act 1901.
(xxvi)	People of any Race, other than Aboriginal—Special Laws—
	Commonwealth Electoral Act 1918–1925 (s. 39).
	Invalid and Old-age Pensions Act 1908–1925 (ss. 16, 21).
	Pacific Island Labourers Act 1901–1906.
	Post and Telegraph Act 1901–1923 (s. 16).
(xxvii)	Immigration and Emigration—
	Contract Immigrants Act 1905.
	Emigration Act 1910.
	Immigration Act 1901–1925.
	Pacific Island Labourers Act 1901–1906.
	Passports Act 1920.
	War Precautions Act Repeal Act 1920–1923 (s. 9).
(xxviii)	Influx of Criminals—
	Immigration Act 1901–1925 (s. 3 (*ga*), (*gb*)).
(xxix)	External Affairs—
	Extradition Act 1903.
	High Commissioner Act 1909.
	Nauru Island Agreement Act 1919.
	Treaties of Washington Act 1922.
(xxx)	Relations with Pacific Islands—
	Pacific Island Labourers Act 1901–1906.
	Nauru Island Agreement Act 1919.
	New Guinea Act 1920.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION—*continued.*
51 (xxxi)	Acquisition of Property for Public Purposes—
	Commonwealth Railways Act 1917–1925 (s. 63).
	Defence Lands Purchase Act 1913.
	Kalgoorlie to Port Augusta Railway Lands Act 1918–1920.
	Lands Acquisition Act 1906–1916 ; 1912.
	Lands Acquisition (Defence) Act 1918.
	Lighthouses Act 1911–1919 (ss. 5, 6).
	Naval Properties Transfer Act 1925
	Northern Territory (Administration) Act 1910 (s. 9).
	Northern Territory Railway Extension Act 1923.
	Purchase Telephone Lines Acquisition Act 1911.
	Seat of Government Act 1908.
	Seat of Government Acceptance Act 1909 ; 1922.
	Seat of Government (Administration) Act 1910 (s. 10).
	War Service Homes Act 1918–1925 (s. 16).
(xxxii)	Control of Railways for Defence Purposes—
	Defence Act 1903–1918 (ss. 64–66, 80, 124 (*r*)).
(xxxiv)	Railway Construction and Extension in any State with the Consent of that State—
	Commonwealth Railways Act 1917–1925.
	Grafton to South Brisbane Railway Act 1924.
	Kalgoorlie to Port Augusta Railway Act 1911–1912.
	Kalgoorlie to Port Augusta Railway Lands Act 1918–1920.
	Northern Territory Railway Extension Act 1923.
(xxxv)	Conciliation and Arbitration for the Prevention and Settlement of Industrial Disputes extending beyond the Limits of any one State—
	Arbitration (Public Service) Act 1920.
	Commonwealth Conciliation and Arbitration Act 1904–1921.
	Industrial Peace Acts 1920.
(xxxix)	Matters Incidental to the Execution of Powers—
	Acts Interpretation Act 1901–1918.
	Acts Interpretation Act 1904–1916.
	Advances to Settlers Act 1923.
	Agreements Validation Act 1923.
	Air Navigation Act 1920.
	Amendments Incorporation Act 1905–1918.
	Appropriation and Supply Acts.
	Arbitration (Public Service) Act 1920.
	Committee of Publc Accounts Act 1913–1920.
	Commonwealth Inscribed Stock Act 1911–1918.
	Commonwealth Public Service Act 1922–1924.
	Commonwealth Public Works Committee Act 1913–1921.
	Commonwealth Salaries Act 1907.
	Commonwealth Shipping Act 1923.
	Commonwealth Workmen's Compensation Act 1912.
	Crimes Act 1914–1915.
	Dairy Produce Export Control Act 1924.
	Defence Retirement Act 1922.
	Dried Fruits Advances Act 1924.
	Dried Fruits Export Control Act 1924.
	Evidence Act 1905.
	Export Guarantee Act 1924–1925.
	Hop Pool Agreement Act 1924.
	Income Tax Collection Act 1923–1924.
	Institute of Science and Industry Act 1920.
	Jury Exemption Act 1905–1922.
	Main Roads Development Act 1923–1925.
	Maternity Allowance Act 1912.
	Meat Industry Encouragement Act 1924.
	Oil Agreement Act 1920 ; 1924.
	Peace Officers Act 1925.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION—*continued.*
	Matters Incidental to the Execution of Powers—*continued*—
51 (xxxix)	Returned Soldiers' Woollen Company Loan Act 1921.
	Royal Commissions Act 1902–1912.
	Rules Publication Act 1903–1916.
	Solicitor-General Act 1916.
	South Australian Farmers' Agreement Act 1922.
	Statutory Declarations Act 1911–1922.
	Superannuation Act 1922–1924.
	Treaties of Washington Act 1922.
	War Precautions Act Repeal Act 1920–1923.
	Westralian Farmers' Agreement Act 1920; 1921.
	Zoological Museum Agreement Act 1924.
	EXECUTIVE GOVERNMENT.
65	Number of Ministers—
	Ministers of State Act 1917.
67	Appointment and Removal of Officers—
	Australian Soldiers Repatriation Act 1920–1922 (ss. 7–21).
	Commonwealth Bank Act 1911–1925 (ss. 12, 16).
	Commonwealth Public Service Act 1922–1924 (ss. 37–49).
	Commonwealth Railways Act 1917–1925 (ss. 5–15, 46–54).
	Commonwealth Shipping Act 1923 (ss. 6, 11).
	Defence Act 1903–1918 (s. 63).
	High Commissioners Act 1909 (ss. 8, 9).
	Institute of Science and Industry Act 1920 (ss. 7, 14).
	National Debt Sinking Fund Act 1923–1925 (s. 6).
	New Guinea Act 1920 (ss. 6–12).
	Norfolk Island Act 1913 (ss. 7, 9).
	Northern Territory Acceptance Act 1910–1919 (ss. 9, 11, 12).
	Papua Act 1905–1924 (s. 19).
	Peace Officers Act 1925.
	Seat of Government (Administration) Act 1924 (ss. 6, 13).
	Solicitor-General Act 1916.
	Superannuation Act 1922–1924 (ss. 61–64).
	Tariff Board Act 1921–1924 (ss. 5–9).
	Trading with the Enemy Act 1914–1921 (s. 2A).
	War Service Homes Act 1918–1925 (ss. 5–15).
	War Service Homes Commissioner Validating Act 1921.
	THE JUDICATURE.
71–80	Constitution and Procedure of the High Court—
	High Court Procedure Act 1903–1925.
	Judiciary Act 1903–1920.
73	Appellate Jurisdiction of the High Court—
	Bankruptcy Act 1924 (s. 26).
	Estate Duty Assessment Act 1914–1922 (s. 28).
	Income Tax Assessment Act 1922–1925 (s. 51, 53).
	Judiciary Act 1903–1920.
	Land Tax Assessment Act 1910–1924 (s. 46).
	Norfolk Island Act 1913 (s. 11).
	Papua Act 1905–1924 (s. 43).
	War-time Profits Tax Assessment Act 1917–1924 (s. 29).
76	Original Jurisdiction of the High Court—
	(1) *In matters arising under the Constitution or involving its interpretation*—
	Judiciary Act 1903–1920 (ss. 23, 30A, 88).
	(2) *In matters arising under Laws made by the Parliament*—
	Australian Industries Preservation Act 1906–1910 (ss. 10, 11, 13, 21, 22, and 26).
	Bankruptcy Act 1924 (s. 20 (3)).

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	THE JUDICATURE—*continued.*
	ORIGINAL JURISDICTION OF THE HIGH COURT—*continued.*
	(2) *In matters arising under Laws made by the Parliament*—continued.
76	Commonwealth Conciliation and Arbitration Act 1904–1921 (ss. 21AA, 31).
	Commonwealth Electoral Act 1918–1925 (ss. 183, 202).
	Copyright Act, 1912 (s. 37 (2)).
	Customs Act 1901–1925 (ss. 221, 227, 245).
	Defence Act 1903–1918 (s. 91).
	Designs Act 1906–1912 (s. 39 (3)).
	Estate Duty Assessment Act 1914–1922 (ss. 39–41).
	Excise Act 1901–1923 (ss. 109, 115, 134).
	Income Tax Assessment Act 1922–1925 (ss. 50–53).
	Industrial Peace Acts 1920.
	Judiciary Act 1903–1920.
	Land Tax Assessment Act 1910–1924 (s. 44).
	Lands Acquisition Act 1906–1916 (ss. 10, 11, 24, 36–39, 45, 46, 50, 54, 56, 59).
	Navigation Act 1912–1925 (ss. 383, 385).
	Patents Act 1903–1921 (ss. 47, 58, 67, 75–77, 84–87A, 111).
	Post and Telegraph Act 1901–1923 (ss. 29, 43).
	Referendum (Constitution Alteration) Act 1906–1919 (ss. 27, 31).
	Trade Marks Act 1905–1922 (ss. 34, 35, 44, 45, 70–72, 95).
	Trading with the Enemy Act 1914–1921 (ss. 9C, 9P).
	War-time Profits Tax Assessment Act 1917–1924 (s. 28).
(iii)	(3) *In matters of Admiralty and Maritime Jurisdiction*—
	Judiciary Act 1903–1920 (ss. 30, 30A).
77 (ii)	EXCLUDING JURISDICTION OF STATE COURTS—
	Judiciary Act 1903–1920 (ss. 38, 38A, 39, 57, 59).
(iii)	INVESTING STATE COURTS WITH FEDERAL JURISDICTION—
	Bankruptcy Act 1924 (ss. 18, 19).
	Commonwealth Conciliation and Arbitration Act 1904–1921 (ss. 44–46, 48).
	Commonwealth Electoral Act 1918–1925 (ss. 58, 184).
	Copyright Act 1912 (ss. 14–17).
	Customs Act 1901–1925 (ss. 221, 227, 245).
	Defence Act 1903–1918 (s. 91).
	Designs Act 1906–1912 (ss. 25, 39).
	Estate Duty Assessment Act 1914–1922 (s. 24).
	Excise Act 1901–1923 (ss. 109, 115, 134).
	Income Tax Assessment Act 1922–1925 (s. 50).
	Judiciary Act 1903–1920 (ss. 17, 39, 68).
	Land Tax Assessment Act 1910–1924 (s. 44).
	Navigation Act 1912–1925 (ss. 91, 92, 318–320, 380–383, 385, 395).
	Patents Act 1903–1921 (ss. 30, 47, 58, 67, 75–77, 84–87A, 111).
	Post and Telegraph Act 1901–1923 (ss. 29, 43).
	Trade Marks Act 1905–1922 (ss. 34, 35, 44, 45).
	War-time Profits Tax Assessment Act 1917–1924 (s. 28).
78	RIGHT TO PROCEED AGAINST COMMONWEALTH OR STATE—
	Judiciary Act 1903–1920 (ss. 56–67).
	FINANCE.
81	APPROPRIATION OF MONEYS—
	Appropriation and Supply Acts.
	Audit Act 1901–1924 (ss. 36–37, 62A).
	Funding Arrangements Act 1921.
	Loans Redemption and Conversion Act 1921.
83	PAYMENT OF MONEYS—
	Audit Act 1901–1924 (ss. 31–37, 62A).
93	CREDITING OF REVENUE AND DEBITING OF EXPENDITURE—
	Surplus Revenue Acts 1908, 1909, 1910.
94	DISTRIBUTION OF SURPLUS REVENUE—
	Surplus Revenue Acts 1908, 1909, 1910.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	FINANCE—*continued.*
96	ASSISTANCE TO STATES—
	Tasmania Grant Act 1922; 1923; 1924.
97	AUDIT OF PUBLIC ACCOUNTS—
	Audit Act 1901–1924.
98	NAVIGATION AND SHIPPING—
	Lighthouses Act 1911–1919.
	Navigation Act 1912–1925.
	River Murray Waters Act 1915–1923.
	Sea-Carriage of Goods Act 1924.
	Seamen's Compensation Act 1911.
100	USE OF WATERS—
	River Murray Waters Act 1915–1923.
101–104	INTER-STATE COMMISSION—
	Inter-state Commission Act 1912.
	THE STATES.
118	RECOGNITION OF STATE LAWS, RECORDS, ETC.—
	State Laws and Records Recognition Act 1901.
119	PROTECTION OF STATES FROM INVASION AND VIOLENCE—
	Defence Act 1903–1918 (s. 51).
	TERRITORIES.
122	GOVERNMENT OF TERRITORIES—
	Defence Act 1903–1918 (s. 49).
	Income Tax Assessment Act 1922–1925 (3, 5).
	Jervis Bay Territory Acceptance Act 1915.
	Judiciary Act 1903–1920 (ss. 11, 68 (*g*)).
	Nauru Island Agreement Act 1919.
	New Guinea Act 1920.
	Norfolk Island Act 1913.
	Northern Territory Acceptance Act 1910–1919.
	Northern Territory (Administration) Act 1910.
	Northern Territory Railway Extension Act 1923.
	Northern Territory Representation Act 1922–1925.
	Papua Act 1905–1924.
	Patents Act 1903–1921 (s. 4A).
	Pine Creek to Katherine River Railway Act 1913.
	Pine Creek to Katherine River Railway Survey Act 1912.
	Removal of Prisoners (Territories) Act 1923.
	Seat of Government Acceptance Act 1909.
	Seat of Government (Administration) Act 1910; 1924.
	Wireless Telegraphy Act 1905–1919 (s. 2).
	MISCELLANEOUS.
125	SEAT OF GOVERNMENT—
	Seat of Government Act 1908.
	Seat of Government Acceptance Act 1909; 1922.
	Seat of Government (Administration) Act 1910; 1924.
128	ALTERATION OF CONSTITUTION—
	Constitution Alteration (Senate Elections) 1906.
	Constitution Alteration (State Debts) 1909.
	Referendum (Constitution Alteration) Act 1906–1919.

CHAPTER II.

PHYSIOGRAPHY.

§ 1. General Description of Australia.

1. **Geographical Position.**—(i) *General.* The Australian Commonwealth, which includes the island continent of Australia proper and the island of Tasmania, is situated in the Southern Hemisphere, and comprises in all an area of about 2,974,581 square miles, the mainland alone containing about 2,948,366 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes 113° 9′ E. and 153° 39′ E., while its northern and southern limits are the parallels of latitude 10° 41′ S. and 39° 8′ S., or, including Tasmania, 43° 39′ S. On its north are the Timor and Arafura Seas and Torres Strait—on its south the Southern Ocean and Bass Strait. The extreme points are " Steep Point " on the west, " Cape Byron " on the east, " Cape York " on the north, " Wilson's Promontory " on the south, or, if Tasmania be included, " South East Cape."

(ii) *Tropical and Temperate Regions.* Of the total area of Australia nearly 40 per cent lies within the tropics. Assuming, as is usual, that the latitude of the Tropic of Capricorn is 23° 30′ S., its correct value for 1925 is 23° 26′ 56.55″, the areas within the tropical and temperate zones are approximately as follows :—

AUSTRALIA—AREAS OF TROPICAL AND TEMPERATE REGIONS.

(States and Territory Partially within Tropics.)

Areas.	Queensland.	Western Australia.	Northern Territory.	Total.
	Sq. Miles.	Sq. Miles.	Sq. Miles.	Sq. Miles.
Within Tropical Zone	359,000	364,000	426,320	1,149,320
Within Temperate Zone	311,500	611,920	97,300	1,020,720
Ratio of Tropical part to whole State ..	0.535	0.373	0.814	0.530
Ratio of Temperate part to whole State ..	0.465	0.627	0.186	0.470

Thus the tropical part is roughly about one-half (0.530) of the three territories mentioned above, or about five-thirteenths of the whole of Australia (0.386).

2. **Area of Australia compared with Areas of other Countries.**—It is not always realized that the area of Australia is nearly as great as that of the United States of America, that it is four-fifths of that of Canada, that it is over one-fifth of the area of the whole of the British Empire, that it is more than three-fourths of the whole area of Europe, and that it is about 25 times as large as Great Britain and Ireland or Italy. This great area, coupled with a limited population, renders the solution of the problem of Australian development a particularly difficult one. The areas of Australia and of other countries are given in the following table :—

AREA OF AUSTRALIA AND OF OTHER COUNTRIES.

Country.	Area.
Continental Divisions—	Sq. miles.
Europe	3,870,823
Asia	15,971,969
Africa	12,637,674
North and Central America and West Indies ..	8,598,135
South America	7,134,175
Australasia and Polynesia	3,464,891
Total, exclusive of Arctic and Antarctic Conts.	51,677,667
Europe—	
Russia	1,680,730
France	212,659
Spain	194,800
Germany	182,213
Sweden	173,105
Poland	149,359
Finland	132,550
Norway	124,964
Rumania	122,282
Italy and annexed Provinces	119,624
Serb, Croat, and Slovene State	96,134
Great Britain and Northern Ireland	94,633
Lithuania	59,633
Czecho-Slovakia ..	54,207
Greece	49,022
Bulgaria	39,814
Iceland	39,709
Hungary	35,911
Portugal	35,490
Azerbaijan	33,640
Austria	32,369
Irish Free State ..	27,000
Georgia	25,510
Latvia	25,000
Spitzbergen, Bear and adjacent islands ..	25,000
Albania	17,374
Denmark	17,144
Estonia	16,955
Switzerland	15,975
Netherlands	13,204
Belgium	11,752
Turkey	10,882
Luxemburg	999
Danzig	754
Andorra	191
Malta	122
Liechtenstein	65
San Marino	38
Monaco	8
Gibraltar	2
Total, Europe ..	3,870,823

Country.	Area.
Asia—	Sq. miles.
Russia	5,460,390
China and Dependencies ..	4,279,170
British India and Administered Territories ..	1,094,300
Arabia	1,000,000
Feudatory Indian States	711,032
Persia	628,000
Dutch East Indies ..	572,950
Turkey	483,656
Japan (and Dependencies)	260,738
Afghanistan	245,000
Siam	200,148
Iraq (Mesopotamia) ..	143,250
Philippine Islands ..	115,026
Laos	82,604
Oman	82,000
Bokhara	79,440
British Borneo, Brunei, and Sarawak	77,106
Cambodia	67,550
Syria	60,000
Nepál	54,000
Tonking	40,530
Annam	39,758
Federated Malay States ..	27,506
Cochin China	26,476
Ceylon	25,332
Khiva	24,310
Malay Protectorate (inc. Johore)	22,486
Bhután	20,000
Armenia	15,090
Aden and Dependencies ..	9,000
Palestine	9,000
Timor, etc. (Portuguese Indian Archipelago) ..	7,330
Cyprus	3,584
Goa, Damao, and Diu ..	1,638
Straits Settlements ..	1,600
Kwantung	538
Hong Kong and Dependencies	391
Wei-hai-wei	285
Bahrein Islands ..	250
French India (Pondicherry, etc.)	196
Kwang Chau Wan ..	190
Maldive Islands ..	115
Macao, etc.	4
Total, Asia	15,971,969
Africa—	
French Sahara	1,500,000
Anglo-Egyptian Sudan ..	1,014,400
French Equatorial Africa	982,049
Belgian Congo	909,654

AREA OF AUSTRALIA AND OF OTHER COUNTRIES—*continued.*

Country.	Area.
AFRICA—*continued.*	Sq. miles.
French Sudan	648,480
Tripolitania and Cyrenaica	580,000
Angola	484,800
South African Union	472,347
Rhodesia	440,000
Portuguese East Africa	428,132
Territory of the Niger	404,914
Egypt	383,000
Tanganyika Territory	365,000
Abyssinia	350,000
Mauritania	347,400
Nigeria and Protectorate	335,700
South-west Africa	322,400
Bechuanaland Protectorate	275,000
Madagascar	224,721
Morocco	223,800
Algeria (inc. Algerian Sahara)	222,180
Kenya Colony and Protectorate	212,000
Cameroon (French)	166,489
Upper Volta	154,400
Italian Somaliland	154,000
Ivory Coast	121,976
Uganda Protectorate	110,300
Rio de Oro and Adrar	109,200
French Guinea	92,640
Gold Coast Protectorate (with Nth. Territories)	80,000
Senegal	74,112
British Somaliland	68,000
Tunis	48,300
Eritrea	45,754
Dahomey	42,460
Liberia	40,000
Nyasaland Protectorate	37,890
Cameroon (British)	31,000
Sierra Leone and Protectorate	31,000
Togoland (French)	22,000
Portuguese Guinea	13,940
Togoland (British)	12,600
Basutoland	11,716
Spanish Guinea (Rio Muni, etc.)	10,810
Spanish Morocco	7,700
Swaziland	6,678
French Somali Coast	5,790
Gambia and Protectorate	4,134
Cape Verde Islands	1,480
Sokotra	1,382
Zanzibar	1,020
Réunion	970
Ifni	965
Mauritius and Dependencies	809
Fernando Po, etc.	795

Country.	Area.
	Sq. miles.
AFRICA—*continued.*	
Comoro Islands, Mayotte, etc.	790
St. Thomas and Principe Islands	360
Seychelles	156
St. Helena	47
Ascension	34
Total, Africa	12,637,674
North and Central America and West Indies—	
Canada	3,729,665
United States	3,026,789
Mexico	767,198
Alaska	590,884
Newfoundland and Labrador	162,734
Nicaragua	51,660
*Greenland	46,740
Honduras	44,275
Cuba	44,164
Guatemala	42,353
Costa Rica	23,000
Santo Domingo	19,332
Salvador	13,176
Haiti	10,204
British Honduras	8,598
Jamaica, inc. Turks, Caicos and Cayman Is.	4,431
Bahamas	4,404
Porto Rico	3,435
Trinidad and Tobago	1,976
Leeward Islands	715
Guadeloupe and Dependencies	688
Windward Islands	516
Curaçao and Dependencies	403
Martinique	385
Barbados	166
Virgin Islands of U.S.A.	132
St. Pierre and Miquelon	93
Bermudas	19
Total, N. and C. America and W. Indies	8,598,135
South America—	
Brazil	3,285,318
Argentine Republic	1,153,119
Peru	532,047
Bolivia	514,155
Colombia (exc. of Panama)	440,846

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* Danish colony only. Total area has been estimated as between 827,000 and 850,000 square miles.

AREA OF AUSTRALIA AND OF OTHER COUNTRIES—*continued.*

Country.	Area.	Country.	Area.
SOUTH AMERICA—*continued.*	Sq. miles.	AUSTRALASIA AND POLYNESIA —*continued.*	Sq. miles.
Venezuela	393,874	British Solomon Islands ..	11,000
Chile	289,828	New Caledonia and Dependencies	8,548
Ecuador	174,155	Fiji	7,083
British Guiana	89,480	Hawaii	6,449
Uruguay	72,153	New Hebrides	5,700
Paraguay	61,647	French Establishments in Oceania	1,520
Dutch Guiana	54,291	Territory of Western Samoa	1,250
Panama	32,380	Gilbert and Ellice Islands	1,011
French Guiana	34,740	Marianne, Caroline, and Marshall Islands ..	960
Falkland Islands and South Georgia ..	5,618	Tonga	385
Panama Canal Zone ..	524	Guam	210
Total, South America ..	7,134,175	Samoa (U.S.A. part) ..	77
Australasia and Polynesia—		Norfolk Island	13
Commonwealth of Australia	2,974,581	Nauru Island	10
Dutch New Guinea ..	160,692	Total, Australasia and Polynesia	3,464,891
New Zealand and Dependencies	103,862		
Territory of New Guinea	91,000		
Papua	90,540	**British Empire**	13,369,664

The figures quoted in the table have, in most cases, been extracted from the Statesman's Year Book for 1925.

3. **Areas of Political Subdivisions.**—As already stated, Australia consists of six States and the Northern and Federal Capital Territories. The areas of these, and their proportions of the total of Australia, are shown in the following table :—

AUSTRALIA—AREA OF STATES AND TERRITORIES.

State or Territory.	Area.	Percentage on Total.
	Sq. miles.	%
New South Wales	309,432	10.40
Victoria	87,884	2.96
Queensland	670,500	22.54
South Australia	380,070	12.78
Western Australia	975,920	32.81
Tasmania	26,215	0.88
Northern Territory	523,620	17.60
Federal Capital Territory ..	940	0.03
Total	2,974,581	100.00

4. **Coastal Configuration.**—(i) *General.* There are no striking features in the configuration of the coast; the most remarkable indentations are the Gulf of Carpentaria on the north, and the Great Australian Bight on the south. The Cape York Peninsula on the extreme north is the only other remarkable feature in the outline. In Year Book No. 1, an enumeration of the features of the coast-line of Australia was given (see pp. 60 to 68).

(ii) *Coast-line.* The lengths of coast-line, exclusive of minor indentations, of each State and of the whole continent, and the area per mile of coast-line, are shown in the following table:—

AUSTRALIA—COAST-LINE AND AREA PER MILE THEREOF.

State.	Coast-line.	Area per Mile of Coast-line.	State.	Coast-line.	Area per Mile of Coast-line.
	Miles.	Sq. miles.		Miles.	Sq. miles.
New South Wales(*a*)	700	443	South Australia	1,540	247
Victoria	680	129	Western Australia	4,350	224
Queensland ..	3,000	223	Continent (*b*) ..	11,310	261
Northern Territory	1,040	503	Tasmania ..	900	29

(*a*) Including Federal Capital Territory. (*b*) Area 2,948,366 square miles.

For the entire Commonwealth of Australia this gives a coast-line of 12,210 miles and an average of 244 square miles for one mile of coast-line. According to Strelbitski, Europe has only 75 square miles of area to each mile of coast-line, and, according to recent figures, England and Wales have only one-third of this, viz., 25 square miles.

(iii) *Historical Significance of Coastal Names.* It is interesting to trace the voyages of some of the early navigators by the names bestowed by them on various coastal features—thus Dutch names are found on various points of the Western Australian coast, in Nuyts' Archipelago, in the Northern Territory and in the Gulf of Carpentaria; Captain Cook can be followed along the coasts of New South Wales and Queensland; Flinders' track is easily recognized from Sydney southwards, as far as Cape Catastrophe, by the numerous Lincolnshire names bestowed by him; and the French navigators of the end of the eighteenth and the beginning of the nineteenth century have left their names all along the Western Australian, South Australian, and Tasmanian coasts.

5. **Geographical Features of Australia.**—In each of the earlier issues of this Year Book fairly complete information has been given concerning some special geographical element. The nature of this information and its position in the various Year Books can be readily ascertained on reference to the special index following the index to maps and graphs at the end of this work.

6. **Fauna, Flora, Geology, and Seismology of Australia.**—Special articles dealing with these features have appeared in previous Year Books, but limits of space naturally preclude their repetition in each volume. As pointed out in 5 *supra*, however, the nature and position of these articles can be readily ascertained from the special index.

7. **Changing of German Place Names in Australia.**—The following German place and district names in Australia were changed during the Great War, as follows:—*New South Wales*—Germanton to Holbrook, German's Hill to Lidster, German Creek to Empire Vale; *Victoria*—Germantown to Grovedale, Hochkirch to Tarrington, Mt. Bismarck to Mt. Kitchener; *Queensland*—Bergen to Murra Murra, Bergenside to Neuve, Bismarck to Maclagan, Engelsburg to Kalbar, Gehrkevale to Mount Mort, Gramzow to Carbrook, Hapsburg to Kowbi, Hessenburg to Ingoldsby, Kirchheim to Haigslea, Murden to Frenchton, Roessler to Applethorpe, Stegeht to Woongoolba, Teutelburg to Willa,

Fahley to Kilbirnie; *South Australia*—Bartsch's Creek to Yedlakoo Creek, Basedow—Hundred of to Hundred of French, Bauer—Cape to Wondoma —Cape, Berlin Rock to Panpandie Rock, Bethanien to Bethany, Bismarck to Weeroopa, Blumberg to Birdwood, Blumenthal to Lakkari, Buchfelde to Loos, Carlsruhe to Kunden, Ehrenbreitstein to Mount Yerila, Ferdinand Creek to Ernaballa Creek, Mount Ferdinand to Mount Warrabillinna, Friedrichstadt to Tangari, Friedrichswalde to Tarnuma, Gebhardt's Hills to Polygon Ridge, German Creek to Benara Creek, German Pass to Tappa Pass, Germantown Hill to Vimy Ridge, Gottlieb's Well to Parnggi Well, Grunberg to Karalta, Grunthal to Verdun, Hahndorf to Ambleside, Hasse's Mound to Larelar Mound, Heidelberg to Kobandilla, Hergott Springs to Marree, Hildesheim to Punthari, Hoffnungsthal to Karawirra, Homburg—Hundred of to Hundred of Haig, Jaenschtown to Kerkanya, Kaiserstuhl to Mount Kitchener, Klaebes to Kilto, Klemzig to Gaza, Krause Rock to Marti Rock, Krichauff—Hundred of to Hundred of Beatty, Krichauff to Beatty, Kronsdorf to Kabminye, Langdorf to Kaldukee, Langmeil to Bilyara, Lobethal to Tweedvale, Meyer—Mount to Mount Kauto, Muller's Hill to Yandina Hill, Neudorf to Mamburdi, Neukirch to Dimchurch, New Hamburg to Willyaroo, New Mecklenburg to Gomersal, Oliventhal to Olivedale, Paech—Hundred of to Hundred of Cannawigara, Petersburg to Peterborough, Pflaum—Hundred of to Hundred of Geegeeia, Rhine Park to Kongolia, Rhine Hill to Mons, Rhine River N. to The Somme, Rhine River S. to The Marne, Rhine Villa to Cambrai, Rhine (North)—Hundred of to Hundred of Jellicoe, Rhine (South)—Hundred of to Hundred of Jutland, Rosenthal to Rosedale, Scherk—Hundred of to Hundred of Sturdee, Schoenthal to Boongala, Schomburgk—Hundred of to Hundred of Maude, Seppelts to Dorrien, Schreiberhau to Warre, Siegersdorf to Bultawilta, Steinfeld to Stonefield, Summerfeldt to Summerfield, Vogelsang's Corner to Teerkoore, Von Doussa —Hundred of to Hundred of Allenby, Wusser's Nob to Karun Nob; *Western Australia* —Mueller Park to Kitchener Park; *Tasmania*—Bismarck to Collins Vale.

§ 2. Climate and Meteorology of Australia.*

1. **Introductory.**—In preceding Year Books some account was given of the history of Australian meteorology, including reference to the development of magnetic observations and the equipment for the determination of various climatological records. (See Year Book No. 3, pp. 79, 80.) In Year Book No. 4, pp. 84 and 87, will be found a short sketch of the creation and organization of the Commonwealth Bureau of Meteorology, and a résumé of the subjects dealt with at the Meteorological Conference of 1907. Space will not permit of the inclusion of this matter in the present issue.

2. **Meteorological Publications.**—The following publications are issued daily from the Central Meteorological Bureau, viz.:—(i) Weather charts. (ii) Rainfall maps. (iii) Bulletins, Victorian and Interstate, showing pressure, temperature, wind, rain, cloud extent, and weather. Similar publications are also issued from the divisional offices in each of the State Capitals.

Commencing with January, 1910, the "Australian Monthly Weather Report," containing statistical records from representative selected stations, with rain maps and diagrams, etc., was published, but was suspended in September, 1913. Complete rainfall and other climatological data are published in volumes of meteorological statistics for each State separately.

The first text book of Australian meteorology, "Climate and Weather of Australia," was published in 1913.

In addition, fifteen Bulletins of Climatology have been published, particulars of which are given in preceding issues of the Official Year Book (see No. 12, page 54).

The following publications have since been issued:—

The Australian Meteorological Observer's Handbook.

Bulletin No. 16. Australian Hurricanes and Related Storms, with appendix on Hurricanes in the South Pacific.

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* Prepared from data supplied by the Commonwealth Meteorologist, H. A. Hunt, Esquire.

Bulletin No. 17. Some periods of Australian Weather; observations of Visibility at various Australian stations during the years 1923 and 1924.

Atmospheric Pollution; observations with the Owens' dust counter during the years 1923 and 1924.

Map showing the principal River Basins of Australia.

Map of Normal Meteorological Conditions in Australia affecting Aviation (set of four sheets) unmounted.

Map of Normal Meteorological Conditions in Australia affecting Aviation (set of four maps) mounted.

Map of Potential Cotton-growing Areas of Australia, determined by Climatic Factors.

3. **General Description of Australia.**—A considerable portion (0.530) of three divisions of Australia is north of the tropic of Capricorn—that is to say, within the States of Queensland and Western Australia, and the Northern Territory, no less than 1,149,320 square miles belong to the tropical zone, and 1,020,720 to the temperate zone. The whole area of Australia within the temperate zone, however, is 1,825,261 square miles; thus the tropical part is about 0.386, or about five-thirteenths of the whole, or the "temperate" region is half as large again as the "tropical" (more accurately 1.591). By reason of its insular geographical position, and the absence of striking physical features, Australia is, on the whole, less subject to extremes of weather than are regions of similar area in other parts of the globe, and latitude for latitude Australia is, on the whole, more temperate.

The altitudes of the surface of Australia range up to a little over 7,300 feet, hence its climate embraces a great many features, from the characteristically tropical to what is essentially alpine, a fact indicated in some measure by the name Australian Alps given to the southern portion of the great Dividing Range.

On the coast, the rainfall is often abundant and the atmosphere moist, but in some portions of the interior it is very limited, and the atmosphere dry. The distribution of forest, therefore, with its climatic influence, is very uneven. In the interior, in places, there are fine belts of trees, but there are large areas also which are treeless, and where the air is hot and parching in summer. Again, on the coast, even so far south as latitude 35°, the vegetation is tropical in its luxuriance, and to some extent also in character. Climatologically, therefore, Australia may be said to present a great variety of features.

4. **Meteorological Divisions.**—(i) *General.* The Commonwealth Meteorologist has divided Australia, for climatological and meteorological purposes, into five divisions. The boundaries between these may be thus defined:—(*a*) Between divisions I. and II., the boundary between South and Western Australia, viz., the 129th meridian of east longitude; (*b*) between divisions II. and III., a line starting at the Gulf of Carpentaria, along the Norman River to Normanton, thence a straight line to Wilcannia on the Darling River, New South Wales; (*c*) between divisions II. and IV., a line from Wilcannia along the Darling River to its junction with the Murray; (*d*) between divisions II. and V., a line from the junction of the Darling and Murray Rivers, along the latter to Encounter Bay; (*e*) between divisions III. and IV., a line starting at Wilcannia, along the Darling, Barwon, and Dumaresq Rivers to the Great Dividing Range, and along that range and along the watershed between the Clarence and Richmond Rivers to Evans Head on the east coast of Australia; (*f*) between divisions IV. and V., a line from the junction of the Darling and Murray Rivers along the latter to its junction with the Murrumbidgee, along the Murrumbidgee to the Tumut River, and along the Tumut River to Tumut, thence a straight line to Cape Howe; (*g*) Tasmania is included in division V.

The population included within these boundaries at the Census of the 4th April, 1921, was approximately as follows:—

Division	I.	II.	III.	IV.	V.
Population	332,000	500,000	824,000	1,915,000	1,866,000

In these divisions, the order in which the capitals occur is as follows:—(*a*) Perth, (*b*) Adelaide, (*c*) Brisbane, (*d*) Sydney, (*e*) Melbourne, and (*f*) Hobart; and the climatological and meteorological statistics relating to the capital cities are dealt with herein in accordance with that order.

(ii) *Special Climatological Stations.* The latitudes, longitudes, and altitudes of special stations, the climatological features of which are graphically represented hereinafter are as follows :—

SPECIAL CLIMATOLOGICAL STATIONS—AUSTRALIA.

Locality.	Height above Sea Level.	Latitude. S.		Longitude. E.		Locality.	Height above Sea Level.	Latitude. S.		Longitude. E.	
	Feet.	deg.	min.	deg.	min.		Feet.	deg.	min.	deg.	min.
Perth	197	31	57	115	50	Darwin	97	12	28	130	51
Adelaide	140	34	56	138	35	Daly Waters	691	16	16	133	23
Brisbane	137	27	28	153	2	Alice Springs	1,926	23	38	133	37
Sydney	138	33	52	151	12	Dubbo	870	32	18	148	35
Melbourne	115	37	49	144	58	Laverton, W.A.	1,530	28	40	122	23
Hobart	177	42	53	147	20	Coolgardie	1,389	30	57	121	10

5. **Temperatures.**—(i) *Comparisons with other Countries.* In respect of Australian temperatures generally, it may be pointed out that the isotherm for 70° Fahrenheit extends in South America and South Africa so far south as latitude 33°, while in Australia it reaches only so far south as latitude 30°, thus showing that, on the whole, Australia has latitude for latitude a more temperate climate than other places in the Southern Hemisphere.

The comparison is even more favourable when the Northern Hemisphere is included, for in the United States the 70° isotherm extends in several of the western States so far north as latitude 41°. In Europe, the same isotherm reaches almost to the southern shores of Spain, passing, however, afterwards along the northern shores of Africa till it reaches the Red Sea, when it bends northward along the eastern shore of the Mediterranean till it reaches Syria. In Asia, nearly the whole of the land area south of latitude 40° N. has a higher temperature than 70°.

The extreme range of shade temperatures in summer and winter in a very large part of Australia amounts to probably only 81°. In Siberia, in Asia, the similar range is no less than 171°, and in North America 153°, or approximately double the Australian range.

Along the northern shores of Australia the temperatures are very equable. At Darwin, for example, the difference in the means for the hottest and coldest months is only 8.4°, and the extreme readings for the year, or the highest maximum in the hottest month and the lowest reading in the coldest month, show a difference of under 50°.

Coming southward, the extreme range of temperature increases gradually on the coast, and in a more pronounced manner inland.

(ii) *Hottest and Coldest Parts.* A comparison of the temperatures recorded at coast and inland stations shows that, in Australia, as in other continents, the range increases with increasing distance from the coast.

In the interior of Australia, and during exceptionally dry summers, the temperature occasionally reaches or exceeds 120° in the shade, and during the dry winters the major portion of the country to the south of the tropics is subject to ground frosts. An exact knowledge of temperature disposition cannot be determined until the interior becomes more settled, but from data procurable it would appear that the hottest area of the continent is situated in the northern part of Western Australia about the Marble Bar and Nullagine goldfields, where the maximum shade temperature during the summer sometimes exceeds 100° continuously for days and weeks. The coldest part of Australia is the extreme south-east of New South Wales and extreme east of Victoria—the region of the Australian Alps. Here the temperature seldom, if ever, reaches 100° even in the hottest of seasons.

Tasmania as a whole enjoys a most moderate and equable range of temperature throughout the year, although occasionally hot winds may cross the Straits and cause the temperature to rise to 100° in the low-lying parts.

(iii) *Monthly Maximum and Minimum Temperatures.* The normal monthly maximum and minimum temperatures can be best shown by means of graphs, which exhibit the nature of the fluctuation of each for all available years. In the diagram herein for nine representative places in Australia, the upper heavy curves show the mean maximum, and the lower heavy curves the mean minimum temperatures based upon daily observations, while the other curves show the humidities.

6. **Humidity.**—After temperature, humidity is the most important element of climate; as regards its effect on human comfort, rainfall supply, and in connexion with engineering problems generally.

In this publication the *absolute humidity* has been graphically represented in the form of inches of vapour pressure (i.e. that portion of the barometric pressure due to vapour). It is this total quantity of moisture in the air which affects personal comfort, plays an important part in varying the density of the atmosphere, and in heating and refrigerating processes. The more commonly quoted value, called the *relative humidity*, refers to the ratio which the actual moisture contents of the air bear to the total amount possible if saturation existed at the given temperature, and is usually quoted as a percentage. The relative humidity is an important factor in all drying operations, but is much less important than the absolute humidity as affecting animal life.

The mean monthly vapour pressure has also been added to the tables of climatological data for the capital cities included herein.

The normal monthly values of vapour pressure, it should be noted, combine to make the annual curve for this element which is comparable with the maximum and minimum temperature curves, but the relative humidities consisting as they do of the extremes for each month, do not show the normal annual fluctuation which would be approximately midway between the extremes.

The order of stations in descending values of vapour pressure is Darwin, Daly Waters, Brisbane, Sydney, Perth, Adelaide, Melbourne, Hobart and Alice Springs, while the relative humidity diminishes in the order, Sydney, Hobart, Darwin, Brisbane, Melbourne, Perth, Adelaide, Daly Waters and Alice Springs.

7. **Evaporation.**—(i) *General.* The rate and quantity of evaporation in any territory is influenced by the prevailing temperature, and by atmospheric humidity, pressure, and movement. In Australia, the question is of perhaps more than ordinary importance, since in its drier regions water has often to be conserved in "tanks"* and dams. The magnitude of the economic loss by evaporation will be appreciated from the tabular records herein, which show that the yearly amount varies from about 32 inches at Hobart to 94 inches at Alice Springs in the centre of the Continent. Over the *inland* districts of the Continent it has been calculated that evaporation equals the rainfall where the annual totals are about 36 inches, the variations above and below this quantity being inverse.

(ii) *Monthly Evaporation Curves.* The curves showing the mean monthly evaporation in various parts of Australia disclose how characteristically different are the amounts for the several months in different localities. The evaporation for representative places is shown on the diagram herein.

(iii) *Loss by Evaporation.* In the interior of Australia the possible evaporation is greater than the actual rainfall. Since the loss by evaporation depends largely on the exposed area, tanks and dams so designed that the surface shall be a minimum are advantageous. Further, the more protected from the direct rays of the sun and from winds, by means of suitable tree planting, the less will be the loss by evaporation. These matters are naturally of more than ordinary concern in the drier districts of Australia.

8. **Rainfall.**—(i) *General.* As even a casual reference to climatological maps indicating the distribution of rainfall and prevailing direction of wind would clearly show, the rainfall of any region is determined mainly by the direction and route of the prevailing winds, by the varying temperatures of the earth's surface over which they blow, and by the physiographical features generally.

Australia lies within the zones of the south-east trades and prevailing westerly winds. The southern limit of the south-east trade strikes the eastern shores at about 30° south latitude, and, with very few exceptions, the heaviest rains of the Australian continent are precipitated along the Pacific slopes to the north of that latitude, the varying quantities being more or less regulated by the differences in elevation of the shores and of the chain of mountains upon which the rain-laden winds blow from the New South Wales northern border to Thursday Island. The converse effect is exemplified on the north-west coast of Western Australia, where the prevailing winds, blowing from the interior of the continent instead of from the ocean, result in the lightest coastal rain in Australia.

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* In Australia, artificial storage ponds or reservoirs are called "tanks."

The westerly winds, which skirt the southern shores, are responsible for the very reliable, although generally light to moderate, rains enjoyed by the south-western portion of Western Australia, by the south-eastern agricultural areas of South Australia, by a great part of Victoria, and by the whole of Tasmania.

(ii) *Factors determining Distribution and Intensity of Rainfall.* (iii) *Time of Rainfall.* In Official Year Book No. 6 (see pp. 72 to 74) some notes were given of the various factors governing the distribution, intensity, and period of Australian rainfall.

(iv) *Wettest and Driest Regions.* The wettest known part of Australia is on the north-east coast of Queensland, between Port Douglas and Cardwell, where three stations situated on, or adjacent to, the Johnstone and Russell Rivers have an average annual rainfall of between 144 and 165 inches. The maximum and minimum falls there are :—Goondi, 241.53 in 1894 and 67.88 inches in 1915, or a range of 173.65 inches ; Innisfail, 211.24 in 1894 and 69.87 inches in 1902, or a range of 141.37 inches ; Harvey Creek, 254.77 in 1921 and 80.47 inches in 1902, or a range of 174.30 inches.

On four occasions more than 200 inches have been recorded at Goondi, the last of these being in 1910, when 204.82 inches were registered. The record at this station covers a period of 33 years.

Harvey Creek, in the shorter period of 25 years has three times exceeded 200 inches, the total for 1921 being 254.77 inches, and at the South Johnstone Sugar Experiment Station, where a gauge has recently been established, 202.52 inches were recorded in 1921.

In Tasmania the wettest part is in the West Coast region, the mean annual rainfall at Lake Margaret being 145.57, with a maximum of 175.12 in 1924.

The driest known part of the continent is in the Lake Eyre district in South Australia (the only part of the continent below sea level), where the annual average is only 5 inches, and where the fall rarely exceeds 10 inches for the twelve months.

The inland districts of Western Australia were at one time regarded as the driest part of Australia, but authentic observations in recent years over the settled districts in the east of that State show that the annual average is from 10 to 12 inches.

(v) *Quantities and Distribution of Rainfall.* The departure from the normal rainfall increases progressively from the southern to the northern shores of the continent, and similarly also at all parts of the continent subject to capricious monsoonal rains, as the comparisons hereunder will show. The general distribution is best seen from the rainfall map herein, which shows the areas subject to average annual rainfalls lying between certain limits. The areas enjoying varying quantities of rainfall determined from the latest available information are shown in the following table :—

AVERAGE ANNUAL RAINFALL DISTRIBUTION.

Average Annual Rainfall.	N.S.W. (*a*)	Victoria.	Queensland.	South Australia	Northern Territory	Western Australia.	Tasmania. (*b*)	Total. (*b*)
	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.
Under 10 inches	48,749	nil	80,496	310,660	140,500	486,952	nil	1,067,357
10—15 ,,	78,454	19,270	81,549	36.460	132,780	255,092	nil	603,605
15—20 ,,	55,762	13,492	111,833	19,940	63,026	94,101	304	358,458
20—25 ,,	45,140	14,170	143,610	8,620	49,157	44,340	3,844	308,881
25—30 ,,	30,539	15,579	99,895	3,258	41,608	31,990	3,016	225,885
30—40 ,,	33,557	14,450	61,963	1,036	37,642	59,520	5,027	213,195
Over 40 ,,	18,171	10,923	91,154	96	58,907	3,925	11,247	194,423
Total area ..	310,372	87,884	670,500	380,070	523,620	975,920	23,438	2,971,804

(*a*) Including Federal Capital Territory. (*b*) Over an area of 2,777 square miles no records are available.

Referring first to the capital cities, the complete records of which are given in the next table, it will be seen that Sydney, with a normal rainfall of 47.62 inches, occupies the chief place ; Brisbane, Perth, Melbourne, Hobart and Adelaide following in that order, Adelaide with 21.21 inches being the driest. The extreme range from the wettest to the driest year is greatest at Brisbane (72.09 inches) and least at Adelaide (19.48 inches).

In order to show how the rainfall is distributed throughout the year in various parts of the continent, the figures of representative towns have been selected. (See map.)

The figures for Darwin, typical of the Northern Territory, show that nearly the whole of the rainfall occurs there in the summer months, while little or none falls in the middle of the year. The figures for Perth, as representing the south-western part of the continent, are the reverse, for while the summer months are dry, the winter ones are very wet. In Melbourne and Hobart the rain is fairly well distributed throughout the twelve months, with a maximum in October for the former, and in November for the latter. The records at Alice Springs and Daly Waters indicate that in the central parts of Australia the wettest months are in the summer and autumn. In Queensland, as in the Northern Territory, the heaviest rains fall in the summer months, but good averages are also maintained during the other seasons.

On the coast of New South Wales, the first six months of the year are the wettest, with a maximum in the autumn; the averages during the last six months are fair, and moderately uniform. Generally it may be said that approximately one-third of the area of the continent, principally in the eastern and northern parts, enjoys an annual average rainfall of from 20 to 50 or more inches, the remaining two-thirds averaging from about 10 to 20 inches.

(vi) *Curves of Rainfall and Evaporation.* The relative amounts of rainfall and evaporation at different times through the year are clearly indicated in the graphs herein. Inspection thereof will show how large is the evaporation when water is fully exposed to the direct rays of the sun and to wind.

(vii) *Tables of Rainfall.* The table of rainfall for a long period of years for each of the various Australian capitals affords information as to the variability of the fall in successive years, and the list of the more remarkable falls furnishes information as to what may be expected on particular occasions. As pointed out in 4 *ante*, the capitals are dealt with in the order in which they occur in the adopted meteorological divisions.

RAINFALL—AUSTRALIAN CAPITAL CITIES, 1901 TO 1925.

Year.	PERTH.			ADELAIDE.			BRISBANE.			SYDNEY.			MELBOURNE.			HOBART.		
	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.
	in.		in.	in.		in.	in.		in.	in.		in.	in.		in.	in.		in.
1901	36.75	122	..	18.01	124	..	38.48	110	..	40.10	149	..	27.45	113	..	25.11	149	
2	27.06	93	..	16.02	123	..	16.17	87	..	43.07	180	..	23.08	102	..	21.85	150	..
3	35.69	140	..	25.47	134	..	49.27	136	..	38.62	173	..	28.43	130	..	25.86	139	..
4	34.35	125	..	20.31	117	..	33.23	124	..	45.93	158	..	29.72	128	..	22.41	139	..
5	34.61	116	..	22.28	131	..	36.76	108	..	35.03	145	..	25.64	129	..	32.09	168	..
6	32.37	121	..	26.51	127	..	42.85	125	..	31.89	160	..	22.29	114	..	23.31	155	..
7	40.12	132	..	17.78	125	..	31.46	119	..	31.32	132	..	22.26	102	..	25.92	166	..
8	30 52	106	34.05	24.56	125	21.15	44.01	125	36.55	45.65	167	43.41	17.72	130	25.36	16.50	148	23.29
9	39.11	107	..	27.69	138	..	34.06	111	..	32.45	177	..	25.86	171	..	27.29	170	..
1910	37.02	135	..	24.62	116	..	49.00	133	..	46.91	160	..	24.61	167	..	25.22	205	..
11	23.38	108	..	15.99	127	..	35.21	128	..	50.24	155	..	36.61	168	..	26.78	193	..
12	27.85	123	..	19.57	116	..	41.30	114	..	47.51	172	..	20.37	157	..	23.14	181	..
13	38.28	141	..	18.16	102	..	40.81	115	..	57.70	141	..	21.17	157	..	19.36	165	..
14	20.21	128	..	11.39	91	..	33.99	141	..	56.42	149	..	18.57	129	..	15.42	154	..
15	43.61	164	..	19.38	117	..	25.66	93	..	34.83	117	..	20.95	167	..	20.91	196	..
16	35.16	128	..	28.16	142	..	52.80	136	..	44.91	161	..	38.04	170	..	43.39	203	..
17	45.64	146	..	28.90	153	..	40.92	127	..	52.40	151	..	30.57	171	..	30.62	214	..
18	39.58	138	34.98	17.41	107	21.13	24.95	121	37.87	42.99	149	46.64	27.13	160	26.39	26.04	179	25.82
19	30.66	120	..	17.21	108	..	19.36	96	..	58.71	152	..	24.89	141	..	22.48	153	..
20	40.35	124	..	26.70	119	..	39.72	122	..	43.42	159	..	28.27	162	..	18.00	182	..
21	41.09	135	..	22.64	100	..	54.31	167	..	43.34	140	..	29.76	154	..	18.04	159	..
22	31.86	135	..	23.20	117	..	35.82	109	..	39.35	136	..	25.02	151	..	28.27	189	..
23	44.47	134	..	29.79	139	..	23.27	93	..	37.01	123	..	22.64	158	..	32.93	198	..
24	33.79	119	..	23.44	143	..	41.08	114	..	37.01	136	..	36.48	171	..	28.76	197	..
25	31.41	126	..	21.91	118	..	53.10	139	..	50.35	145	..	17.57	144	..	22.40	171	..
Aver.	34.03	119	..	21.21	123	..	45.27	128	..	47.62	153	..	26.20	138	..	23.81	147	..
No. of Yrs.	50	50	..	87	87	..	76	66	..	86	86	..	82	70	..	83	83	..

NOTE.—The above average rainfall figures for Brisbane, Sydney, and Melbourne differ slightly from the mean annual falls given in the Climatological Tables, which are for a less number of years. Annual totals from 1860 to 1900 inclusive will be found in Official Year Book No. 15, page 53.

9. **Remarkable Falls of Rain.**—The following are the more remarkable falls of rain in the various States and in the Northern Territory, which have occurred within a period of twenty-four hours. In New South Wales and Queensland falls of less than 15 inches in the twenty-four hours are not included. Reference, however, to them may be found in preceding Official Year Books (see No. 14, pp. 60–63) :—

HEAVY RAINFALLS—NEW SOUTH WALES, UP TO 1925, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.
		ins.
Anthony ..	28 Mar., 1887	17.14
Araluen	27 May, 1925	15.83
Bega	27 Feb., 1919	17.88
Broger's Creek ..	14 ,, 1898	20.05
,, ,, ..	13 Jan. 1911	20.83
Bulli Mountain ..	13 Dec., 1898	17.14
Burragate ..	27 ,, 1919	16.38
Candelo	27 Feb., ,,	18.58
Condong ..	27 Mar., 1887	18.66
Cordeaux River ..	14 Feb., 1898	22.58
Dapto	11 May, 1925	15.00
Kembla Heights ..	13 Jan., 1911	17.46
Madden's Creek ..	13 Jan., 1911	18.68
Morpeth ..	9 Mar., 1893	21.52
Mount Kembla ..	13 Jan., 1911	18.25
Numbugga ..	27 Feb., 1919	17.87
Tongara Farm ..	14 ,, 1898	15.12
Towamba ..	5 Mar., 1893	20.00
South Head (near Sydney) ..	29 Apr., 1841	20.12
,, ,, ..	16 Oct., 1844	20.41

HEAVY RAINFALLS—QUEENSLAND, UP TO 1925, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.
		ins.
Anglesey ..	26 Dec., 1909	18.20
Atherton (Cairns) ..	31 Jan., 1913	16.69
Babinda (Cairns) ..	1 Feb., ,,	20.51
,, ,, ..	24 Jan., 1916	22.30
,, ,, ..	21 Apr., 1920	16.05
Babinda	25 Mar., 1921	15.76
Banyan	1 Mar., 1925	16.43
Bloomsbury ..	14 Feb., 1893	17.40
,, ..	10 Jan., 1901	16.62
Brisbane ..	21 ,, 1887	18.31
Buderim Mountain	11 ,, 1898	26.20
Bundaberg ..	16 ,, 1913	16.94
Burnett Head (Bundaberg) ..	16 ,, 1913	15.22
Cairns	11 Feb., 1911	15.17
,, ...	2 Apr., ,,	20.16
Carbrook ..	23 Jan., 1918	22.66
,, ..	24 Jan., 1918	15.77
Cardwell ..	18 Mar., 1904	18.24
,, ...	11 Mar., 1918	16.65
Carmilla	23 Jan., 1918	15.92
Clare	26 ,, 1896	15.30
Collaroy	23 ,, 1918	18.06
Crohamhurst (Blackall Range)	2 Feb., 1893	35.71
,, ,,	9 Jan., 1898	19.55
,, ,,	6 Mar., ,,	16.01
Croydon	29 Jan., 1908	15.00
Dungeness ..	16 Mar., 1893	22.17
Dunira	9 Jan., 1898	18.45
,, ...	6 Mar., ,,	15.95
Dunwich	8 May, 1925	15.46
Fairymead Plantation (Bundaberg)	16 Jan., 1913	15.32
Flying Fish Point ..	7 Apr., 1912	16.06
Flying Fish Point	31 Jan., 1913	16.10
Gladstone ..	4 Feb., 1911	18.83
Glen Boughton ..	5 Apr., 1894	18.50
Goldsborough (Cairns) ..	31 Jan., 1913	19.92
Goondi Mill (Innisfail) ..	6 Apr., 1894	15.69
,, ,, ..	29 Dec., 1903	17.83
,, ,, ..	10 Feb., 1911	17.68
,, ,, ..	6 Apr., 1912	15.55
Goondi	30 Jan., 1913	24.10
Goorganga ..	23 ,, 1918	18.17
Halifax	5 Feb., 1899	15.37
,, ...	6 Jan., 1901	15.68
Hambledon Mill ..	2 ,, 1911	18.61
,, ,, ..	1 Apr., ,,	19.62
,, ,, ..	30 Jan., 1913	17.32
Hampden ..	23 Apr., 1918	17.30
,, ..	24 ,, ,,	17.19
Harvey Creek ..	8 Mar., 1899	17.72
,, ,, ..	11 Jan., 1905	16.96
,, ,, ..	3 ,, 1911	27.75
,, ,, ..	2 Apr., ,,	16.46
,, ,, ..	31 Jan., 1913	24.72
,, ,, ..	25 Mar., 1921	15.80
,, ,, ..	12 Mar., 1924	16.50
,, ,, ..	13 Mar., ,,	15.78
Haughton Valley ..	26 Jan., 1896	18.10
Holmwood (Woodford)	2 Feb., 1893	16.19
Howard ..	15 Jan., 1905	19.55
Huntley ..	27 Dec., 1916	18.94
Innisfail (formerly Geraldton) ..	11 Feb., 1889	17.13
,, ,, ..	6 Apr., 1894	16.02

HEAVY RAINFALLS—QUEENSLAND—*continued.*

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Innisfail (formerly Geraldton) ..	24 Jan., 1900	15.22	Mourilyan ..	7 Apr., 1912	18.97
,, ,, ..	29 Dec., 1903	21.22	,, ..	31 Jan., 1913	15.05
,, ,, ..	2 Apr., 1911	15.00	Mundoolun ..	21 ,, 1887	17.95
,, ,, ..	7 ,, 1912	20.50	Nambour ..	9 ,, 1898	21.00
,, ,, ..	31 Jan., 1913	20.91	,, ..	27 Dec., 1909	16.80
Kamerunga (Cairns)	2 Apr., 1911	21.00	Netherdale ..	22 Jan., 1918	19.50
,, ,,	31 Jan., 1913	16.00	Oxenford ..	14 Mar., 1908	15.65
Koumala ..	23 ,, 1918	22.31	Palmwoods ..	10 Jan., 1898	15.85
,, ..	24 ,, ,,	20.65	,, ..	25 Dec., 1909	17.75
Kuranda (Cairns) ..	11 Feb., 1911	16.30	Pialba (Marybor'gh)	16 Jan., 1913	17.22
,, ,, ..	17 Mar. ,,	15.10	Plane Creek (Mackay) ..	26 Feb., ,,	27.73
,, ,, ..	31 ,, ,,	18.60	Port Douglas ..	10 Mar., 1904	16.34
,, ,, ..	1 Apr., ,,	24.30	,, ,, ..	17 ,, 1911	16.10
,, ,, ..	2 ,, ,,	28.80	,, ,, ..	1 Apr., ,,	31.53
,, ,, ..	31 Jan., 1913	16.34	Proserpine ..	23 Jan., 1918	18.17
Landsborough ..	2 Feb., 1893	15.15	Ravenswood ..	24 Mar., 1890	17.00
Low Island ..	10 Mar., 1904	15.07	Redcliffe ..	16 Feb., 1893	17.35
,, ..	1 Apr., 1911	15.30	Rosedale ..	16 Jan., 1913	18.90
Lyndon (*via* Brixton)	3 ,, 1917	17.00*a*	Sarina	23 ,, 1918	22.60
Mackay	21 Jan., 1918	24.70*b*	St. Lawrence ..	30 ,, 1896	15.00
,, ...	22 ,, ,,	17.25*c*	The Hollow (Mackay)	23 Feb., 1888	15.12
Sugar Experimental Farm, Mackay ..	21 ,, ,,	16.80	Thornborough ..	20 Apr., 1903	18.07
,, ..	22 ,, ,,	17.20	Townsville ..	24 Jan., 1892	19.20
Macnade Mill ..	5 Feb., 1899	15.20	,, ..	28 Dec., 1903	15.00
,, ..	6 Jan., 1901	23.33	Victoria Mill ..	6 Jan., 1901	16.67
,, ..	4 Mar., 1915	22.00	Woodlands (Yepp'n)	31 ,, 1893	23.07
Mapleton ..	26 Dec., 1909	15.72	Wootha ..	10 Feb., 1915	15.93
Mirani	12 Jan., 1901	16.59	Yandina ..	1 ,, 1893	20.08
Miriam Vale (B'berg)	17 ,, 1913	15.80	,, ..	9 Jan., 1898	19.25
Mooloolah ..	13 Mar., 1892	21.53	,, ..	28 Dec., 1909	15.80
,, ..	2 Feb., 1893	19.11	Yarrabah ..	2 Apr., 1911	30.65
Mount Cuthbert ..	8 Jan., 1911	18.00	,, ..	24 Jan., 1916	27.20
Mount Molloy ..	31 Mar., ,,	20.00	,, ..	25 ,, ,,	18.60
,, ..	1 Apr., ,,	20.00	Yeppoon ..	31 ,, 1893	20.05
,, ..	2 ,, ,,	20.00	,, ..	8 ,, 1898	18.05
Mourilyan ..	11 Feb., 1911	17.40	,, ..	8 Oct., 1914	21.70

HEAVY RAINFALLS—WESTERN AUSTRALIA, UP TO 1925, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Alice Downs ..	15 Mar., 1922	10.58	Exmouth Gulf ..	2 Feb., 1918	12.50
Balla Balla ..	21 ,, 1899	14.40	Fortescue ..	3 May, 1890	23.36
Bamboo Creek ..	22 ,, ,,	10.10	Frazier Downs ..	3 Mar., 1916	11.25
Boodarie ..	21 ,, ,,	14.53	Gnaraloo ..	20 ,, 1923	11.00
,, ..	3 Jan., 1896	10.03	Kerdiadary ..	7 Feb., 1901	12.00
Booloogooroo ..	17 ,, 1923	10.96	Meda	2 Mar., 1916	10.55
Broome	6 Jan., 1917	14.00	Millstream ..	5 ,, 1900	10.00
Carlton	11 ,, 1903	10.64	Minilya ..	15 Jan., 1923	11.50
Cossack	3 Apr., 1898	12.82	Obagama ..	28 Feb., 1910	12.00
,, ...	16 ,, 1900	13.23	,, ..	24 Dec., 1920	13.02
Croydon	3 Mar., 1903	12.00	Pilbara	2 Apr., 1898	14.04
Derby	29 Dec., 1898	13.09	Point Cloates ..	20 Jan., 1909	10.87
,, ...	7 Jan., 1917	16.47	Point Torment ..	17 Dec., 1906	11.86

a Mr. Jas. Laidlaw, of Lyndon, states that this fell in 4 hours. *b* 37½ hours. *c* 22½ hours.

HEAVY RAINFALLS, WESTERN AUSTRALIA—*continued.*

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Port George IV.	17 Jan., 1915	11.24	Whim Creek	21 Mar., 1899	18.17
Roebourne	3 Apr., 1898	11.44	,, ,,	6 ,, 1900	10.03
,,	6 Mar., 1900	10.32	,, ,,	3 ,, 1903	10.44
Roebuck Plains	5 Jan., 1917	14.01	Winderrie	17 Jan., 1923	14.23
,, ,,	6 ,, ,,	22.36	Woodstock	21 ,, 1912	13.00
Springvale	14 Mar., 1922	12.25	Wyndham	27 Jan., 1890	11.60
Tambray	6 ,, 1900	11.00	,,	4 Mar., 1919	12.50
,,	3 ,, 1903	10.47	Yardie Creek	3 Feb., 1918	10.00
Thangoo	17-19 Feb. '96	24.18	Yeeda	2 Mar., 1916	10.70
,,	28 Dec., 1898	11.15	,,	6 Jan., 1917	10.20
Whim Creek	3 Apr., 1898	29.41	,,	7 ,, ,,	11.75

HEAVY RAINFALLS—NORTHERN TERRITORY, UP TO 1925, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Bathurst Island Mission	7 Apr., 1925	11.85	Cosmopolitan Gold Mine	24 Dec., 1915	10.60
Bonrook	24 Dec., 1915	10.60	Darwin	7 Dec., 1915	11.67
Borroloola	14 Mar., 1899	14.00	Groote Eylandt	30-31 Mar., '23	12.00[a]
Brock's Creek	4 Jan., 1914	10.68	Lake Nash	21 Mar., 1901	10.25
,, ,,	24 Dec., 1915	14.33	Pine Creek	8 Jan., 1897	10.35
Burrundie	4 Jan., 1914	11.61			

(*a*) Approximate only, as gauge was washed away.

HEAVY RAINFALLS—SOUTH AUSTRALIA, UP TO 1925, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Wilmington	28 Feb., 1921	3.97	Wilmington	1 Mar., 1921	7.12

HEAVY RAINFALLS—VICTORIA, UP TO 1925, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Balook	26 Sept., 1917	5.32	Mt. Buffalo	6 June, 1917	8.53
,,	27 ,, ,,	7.23	,,	7 ,, ,,	6.56
,,	28 ,, ,,	2.08			

HEAVY RAINFALLS—TASMANIA, UP TO 1925, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Cullenswood	5 June, 1923	10.50	Mathinna	8-10 Mar., '11	15.79
Gould's Country	8-10 Mar., '11	15.33	The Springs	30-31 Jan., '16	10.75
Lottah	8-10 ,, ,,	18.10	Triabunna	5 June, 1923	10.20

10. **Snowfall.**—Light snow has been known to fall occasionally so far north as latitude 31° S., and from the western to the eastern shores of the continent. During exceptional seasons, it has fallen simultaneously over two-thirds of the State of New South Wales, and has extended at times along the whole of the Great Dividing Range, from its southern extremity in Victoria so far north as Toowoomba in Queensland. During the winter, for several months, snow covers the ground to a great extent on the Australian Alps, where also the temperature falls below zero Fahrenheit during the night. In the ravines around Kosciusko and similar localities the snow never entirely disappears.

The antarctic "V"-shaped disturbances are always associated with the most pronounced and extensive snowfalls. The barometric gradients are very steep where the "trough line" extends northward, and the apexes are unusually sharp-pointed, and protrude into very low latitudes, sometimes even to the tropics.

11. **Hail.**—Hail falls most frequently along the southern shores of the continent in the winter, and over south-eastern Australia during the summer months. The size of the hailstones generally increases with distance from the coast, a fact which lends strong support to the theory that hail is brought about by ascending currents. A summer rarely passes without some station experiencing a fall of stones exceeding in size an ordinary hen-egg, and many riddled sheets of light-gauge galvanized iron bear evidence of the weight and penetrating power of the stones.

The hailstorms occur most frequently when the barometric readings indicate a flat and unstable condition of pressure. They are almost invariably associated with tornadoes or tornadic tendencies, and on the east coast the clouds from which the stones fall are generally of a remarkable sepia-coloured tint.

12. **Barometric Pressures.**—The mean annual barometric pressure (corrected to sea-level and standard gravity) in Australia varies from 29.80 inches on the north coast to 29.92 inches over the central and 30.03 inches in the southern parts of the continent. In January, the mean pressure ranges from 29.70 inches in the northern and central areas to 29.95 inches in the southern. The July mean pressure ranges from 29.90 inches at Darwin to 30.12 inches at Alice Springs. Barometer readings corrected to mean sea-level and standard gravity have, under anticyclonic conditions in the interior of the continent, ranged as high as 30.77 inches (at Kalgoorlie on the 28th July, 1901) and have fallen as low as 27.55 inches. This lowest record was registered at Mackay during a tropical hurricane on the 21st January, 1918. An almost equally abnormal reading of 27.88 inches was recorded at Innisfail during a similar storm on the 10th March, 1918. The mean annual fluctuations of barometric pressure for the capitals of Australia are shown on the graph herein.

13. **Wind.**—Notes on the distinctive wind currents in Australia were given in preceding Year Books (see No. 6, page 83), but, owing to limitations of space, have not been included herein.

14. **Cyclones and Storms.**—The "elements" in Australia are ordinarily peaceful, and while destructive cyclones have visited various parts, more especially coastal areas, such visitations are rare, and may be properly described as erratic.

During the winter months, the southern shores of the continent are subject to cyclonic storms, evolved from the V-shaped depressions of the southern low-pressure belt. They are felt most severely over the south-western parts of Western Australia, to the south-east of South Australia, in Bass Strait, including the coast line of Victoria, and on the west coast of Tasmania. Apparently the more violent wind pressures from these cyclones are experienced in their northern half, or in that part of them which has a north-westerly to a south-westerly circulation.

The north-east coast of Queensland is occasionally visited by hurricanes from the north-east tropics. During the first four months of the year, these hurricanes appear to have their origin in the neighbourhood of the South Pacific Islands, their path being a parabolic curve first to the S.W. and finally towards the S.E. Only a small percentage, however, reach Australia, the majority recurving in their path to the east of New Caledonia.

Very severe cyclones, locally known as "willy willies," are peculiar to the north-west coast of Western Australia from the months of November to April inclusive. They apparently originate in the ocean in the vicinity of Cambridge Gulf, and travel in a south-westerly direction with continually increasing force, displaying their greatest energy near Cossack and Onslow, between latitudes 20° and 22° South. The winds in these storms, like those from the north-east tropics, are very violent and destructive, and cause great havoc amongst the pearl-fishers. The greatest velocities are usually to be found in the south-eastern quadrant of the cyclones, with north-east to east winds. After leaving the north-west coast, these storms either travel southwards, following the coastline, or cross the continent to the Great Australian Bight. When they take the latter course, their track is marked by torrential rains, as much as 29.41 inches, for example, being recorded in 24 hours at Whim Creek from one such occurrence. Falls of 10 inches and over have frequently been recorded in the northern interior of Western Australia from similar storms.

Some further notes on severe cyclones and on " southerly bursters," a characteristic feature of the eastern part of Australia, will be found in previous issues of the Official Year Book (see No. 6, pp. 84, 85, 86).

A special article dealing with " Australian Hurricanes and Related Storms " appeared in Official Year Book No. 16, pp. 80–84.

15. **Influences affecting Australian Climate.**—(i) *General.* Australian history does not cover a sufficient period, nor is the country sufficiently occupied, to ascertain whether or not the advance of settlement has materially affected the climate as a whole. Local changes have, however, taken place, a fact which suggests that settlement and the treatment of the land have a distinct effect on local conditions. For example, the mean temperature of Sydney shows a rise of two-tenths of a degree during the last twenty years, a change probably brought about by the great increase of residential and manufacturing buildings within the city and in the surrounding suburbs. Again, low-lying lands on the north coast of New South Wales, which originally were seldom subject to frosts, have, with the denudation of the surrounding hills from forests, experienced annual visitations, the probable explanation being that through the absence of trees the cold air of the high lands now flows unchecked and untempered down the sides of the hills to the valleys and lower lands.

(ii) *Influence of Forests on Climate.* As already indicated, forests doubtless exercise a great influence on local climate, and hence, to the extent that forestal undertakings will allow, the weather can be controlled by human agency. The direct action of forests is an equalizing one ; thus, especially in equatorial regions, and during the warmest portion of the year, they considerably reduce the mean temperature of the air. They also reduce the diurnal extremes of shade temperatures by altering the extent of radiating surface by evaporation, and by checking the movement of air, and while decreasing evaporation from the ground, they increase the relative humidity. Vegetation greatly diminishes the rate of flow-off of rain and the washing away of surface soil, and when a region is protected by trees, a steadier water supply is ensured, and the rainfall is better conserved. In regions of snowfall, the supply of water to rivers is similarly regulated, and without this and the sheltering influence of ravines and " gullies," watercourses supplied mainly by melting snow would be subject to alternate periods of flooding and dryness. This is borne out in the case of the inland rivers ; the River Murray, for example, which has never been known to become dry, deriving its steadiness of flow mainly through the causes indicated.

(iii) *Direct Influence of Forests on Rainfall.* Whether forests have a direct influence on rainfall is a debatable question, some authorities alleging that precipitation is undoubtedly induced by forests, while others take the opposite view.

Sufficient evidence exists, however, to prove that, even if the rainfall has not increased, the beneficial climatic effect of forest lands more than warrants their protection and extension. Rapid rate of evaporation, induced by both hot and cold winds, injures crops and makes life uncomfortable on the plains, and, while it may be doubted that the forest aids in increasing precipitation, it must be admitted that it does check winds and the rapid evaporation due to them. Trees as wind-breaks have been successfully planted in central parts of the United States, and there is no reason why similar experiments should not be successful in many parts of the treeless interior of Australia. The belts should be planted at right angles to the direction of the prevailing parching winds, and if not more than half a mile apart will afford shelter to the enclosed areas.

In previous issues some notes on observations made in other countries were added (see Official Year Book No. 6, pp. 86 and 95).

16. **Rainfall and Temperatures, Various Cities.**—The following table shows rainfall and temperature for various important cities throughout the world, for the site of the Federal capital, and for the capitals of the Australian States.

RAINFALL AND TEMPERATURE—VARIOUS CITIES.

Place.	Height above M.S.L.	Annual Rainfall.			Temperature.					
		Average.	Highest.	Lowest.	(a) Mean Summer.	(b) Mean Winter.	Highest on Record.	Lowest on Record.	Average Hottest Month.	Average Coldest Month.
	Ft.	Ins.	Ins.	Ins.	Fahr.	Fahr.	Fahr.	Fahr.	Fahr.	Fahr.
Amsterdam	6	27.29	40.59	17.60	63.2	36.8	90.0	4.1	64.4	35.4
Auckland	125	43.88	74.15	26.32	66.2	52.5	91.0	31.9	67.1	51.8
Athens	351	15.48	33.33	4.56	79.2	49.1	109.4	19.6	81.0	47.4
Bergen	72	77.09	111.58	44.49	56.8	34.2	88.5	4.8	57.9	33.6
Berlin	161	22.72	30.04	14.25	64.8	33.0	98.6	−13.0	66.0	31.8
Berne	1,877	36.30	58.23	24.69	62.2	30.1	91.4	− 3.6	64.4	28.0
Bombay	37	71.15	114.89	33.41	83.5	75.1	100.0	55.9	84.8	74.2
Breslau	482	22.52	32.56	16.50	64.1	33.5	100.0	−23.4	65.5	29.3
Brussels	328	28.35	41.18	17.73	62.6	36.0	95.5	− 4.4	63.7	34.5
Budapest	500	25.20	35.28	16.79	68.6	30.2	98.6	− 5.1	70.4	28.2
Buenos Ayres	82	38.78	79.72	20.04	72.7	50.9	103.1	22.3	73.8	50.0
Calcutta	21	61.82	98.48	38.43	85.6	68.0	108.2	44.2	86.0	66.4
Capetown	40	25.50	36.72	17.71	68.1	54.7	102.0	34.0	68.8	53.9
Caracas	3,420	30.03	47.36	23.70	68 3	65.3	87.8	48.2	69.2	63.7
Chicago	823	33.28	45.86	24.52	70.0	26.1	103.0	−23.0	72.4	23.7
Christchurch	25	25.16	35.30	13.54	61.3	43.3	95.7	21.3	61.6	42.4
Christiania (Oslo)	75	23.23	32.21	16.26	61.0	24.5	95.0	−21.1	62.6	23.9
Colombo	40	83.83	139.70	51.60	81.5	79.9	95.8	65.0	82.6	79.1
Constantinople	245	28.75	42.74	14.78	74.0	43.5	103.6	13.0	75.7	42.0
Copenhagen	10	20.79	25.83	15.47	60.4	33.3	85.5	− 3.3	61.9	32.4
Dresden	115	26.80	34.49	17.72	62.9	82.4	93.4	−15.3	64.4	31.6
Dublin	47	27.66	35.56	16.60	59.4	42.0	87.2	13.3	60.5	41.7
Dunedin	300	36.96	54.51	22.15	56.3	42.6	94.0	23.0	57.0	41.5
Durban	260	40.79	71.27	27.24	75.6	64.4	110.6	41.1	76.7	63.8
Edinburgh	441	25.21	32.05	16.44	55.8	38.8	87.7	5.0	57.2	38.3
Geneva	1,328	33.48	46.89	21.14	64.4	33.7	..	..	66.2	32.2
Genoa	157	51.29	108.22	28.21	73.8	46.8	94.5	16.7	75.4	45.5
Glasgow	184	38.49	56.18	29.05	52.7	41.0	84.9	6.6	58.0	38.4
Greenwich	149	23.50	35.54	16.38	62.0	39.5	100.0	6.9	63.5	38.5
Hong Kong	109	84.28	119.72	45.84	86.2	64.8	97.0	32.0	86.7	62.9
Johannesburg	5,750	31.63	50.00	21.66	65.4	54.4	94.0	23.3	68.2	48.9
Leipzig	384	24.69	31.37	17.10	63.1	31.5	97.3	−14.8	64.8	30.6
Lisbon	312	29.18	52.79	17.32	69.6	51.3	94.1	32.5	70.2	49.3
London (Kew)	18	23.80	38.20	16.64	61.2	39.8	94.0	9.4	62.7	38.9
Madras	22	49.85	88.41	18.45	89.0	76.8	113.0	57.5	89.9	76.1
Madrid	2,149	16.23	27.48	9.13	73.0	41.2	107.1	10.5	75.7	39.7
Marseilles	246	22.24	43.03	12.28	70.5	45.3	100.4	11.7	72.3	44.6
Moscow	526	18.94	29.28	12.07	63.4	14.7	99.5	−44 5	66.1	11.9
Naples	489	34.00	56.58	21.75	73.6	48.0	99.1	23.9	75.4	46.8
New York	314	44.63	58.68	33.17	71.4	31.8	102.0	−13.0	73.5	30.2
Ottawa	236	33.40	53.79	25.63	67.2	14.1	98.0	−33.0	69.7	12.0
Paris	164	22.64	29.57	16.46	63.5	37.2	101.1	−14.1	64.9	36.1
Pekin	143	24.40	36.00	18.00	77.7	26.6	114.0	− 5.0	79.2	23.6
Petrograd	16	21.30	29.52	13.75	61.1	17.4	97.0	−38.2	63.7	15.2
Quebec	296	40.50	53.79	32.12	63.5	12.4	96.0	−34.0	66.3	10.1
Rome	166	32.57	57.89	12.72	74.3	46.0	104.2	17.2	76.1	44.6
San Francisco	155	22.27	38.82	9.00	58.8	50.5	101.0	29.0	59.3	49.5
Shanghai	21	45.00	62.52	27.92	78.0	41.1	102.9	10.2	80.4	37.8
Singapore	8	91.99	158.68	32.71	81.2	78.6	94.2	63.4	81.5	78.3
Stockholm	144	19.09	28.27	11.81	59.5	27.3	96.8	−25.6	61.9	26.4
Tokio	65	61.45	86.37	45.72	74.8	39.2	97.9	17.2	77.7	37.5
Trieste	85	42.94	63.14	26.57	73.9	41.3	99.5	14.0	76.3	39.9
Vienna	663	24.50	33.90	16.50	65.7	30.4	97.7	− 8.0	67.1	28.0
Vladivostock	55	19.54	33.60	9.39	63.9	11.0	95.7	−21.8	69.4	6.1
Washington	112	43.50	61.33	30.85	74.7	34.5	106.0	−15.0	76.8	32.9
Wellington (N.Z.)	10	48.65	67.68	27.83	61.8	48.6	88.0	28.6	62.5	47.7
Zürich	1,542	45.15	78.27	29.02	63.3	31.3	94.1	− 0.8	65.1	29.5

FEDERAL CAPITAL SITE.

Canberra (Dist.) Queanbeyan	2,000 to 2,900	22.73	41.29	10.45	(a) 67.8	(b) 44.0	102.6	14.0	68.3	42.6

STATE CAPITALS.

Perth	197	34.03	46.73	20.21	(a) 73.0	(b) 55.9	108.4	34.2	74.2	55.2
Adelaide	140	21.21	30.87	11.39	73.0	53.0	116.3	32.0	74.1	51.7
Brisbane	137	45.27	88.26	16.17	76.7	59.6	108.9	36.1	77.1	58.4
Sydney	138	47.62	82.76	21.49	71.0	54.1	108.5	35.9	71.6	52.6
Melbourne	115	25.65	44.25	15.61	66.6	50.0	111.2	27.0	67.5	48.6
Hobart	177	23.81	43.39	13.43	61.5	46.8	105.2	27.0	62.3	45.6

(a) Mean of the three hottest months. (b) Mean of the three coldest months.

17. Climatological Tables.—The means, averages, extremes, totals, etc., for a number of climatological elements have been determined from long series of observations at the Australian capitals up to and including the year 1925. These are given in the following tables :—

CLIMATOLOGICAL DATA—PERTH, WESTERN AUSTRALIA.

Lat. 31° 57′ S., Long. 115° 50′ E. Height above M.S.L. 197 Ft.

Barometer, Wind, Evaporation, Lightning, Clouds, and Clear Days.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. Greatest Number of Miles in One Day.	Wind. Mean Hourly Pressure. (lbs.)	Wind. Total Miles.	Wind. Prevailing Direction.	Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m. & 9 p.m.	No. of Clear Days.
No. of yrs. over which observation extends	41	28	28	28	28	27	28	29	29
January	29.906	797 27/98	0.68	11,224	S S E	10.37	1.6	2.8	13.9
February	29.922	650 6/08	0.62	10.139	S S E	8.59	1.5	2.9	11.7
March	29.986	651 6/13	0.53	9.932	S S E	7.63	1.4	3.2	12.0
April	30.076	955 25/00	0.40	8,356	S E	4.76	1.2	4.2	7.9
May	30.072	768 5/12	0.36	8,090	E N E	2.72	2.2	5.3	5.1
June	30.058	861 27/10	0.36	7,951	N	1.75	2.3	5.9	3.3
July	30.094	949 11/99	0.39	8.461	N	1.71	2.4	5.4	5.1
August	30.090	966 15/03	0.42	8,769	W	2.38	1.6	5.2	5.3
September ..	30.061	864 11/05	0.46	8,607	S W	3.30	1.4	4.9	5.8
October	30.031	809 6/16	0.53	9,850	S S W	5.22	1.0	4.8	5.8
November.. ..	29.990	777 18/97	0.60	10.067	S	7.63	1.2	3.8	8.3
December ..	29.927	776 6/22	0.65	10,911	S	9.77	1.8	3.1	12.1
Year Totals ..	—	—	—	—	—	65.83	19.6	—	96.3
Year Averages ..	30.018	—	0.50	9,363	S	—	—	4.3	—
Year Extremes ..	—	966 15/8/03	—	—	—	—	—	—	—

Temperature and Sunshine.

Month.	Mean Temperature (Fahr.). Mean Max.	Mean Min.	Mean	Extreme Shade Temperature (Fahr.). Highest.	Lowest.	Extreme Range.	Extreme Temperature (Fahr.). Highest in Sun.	Lowest on Grass.	Mean Hours of Sunshine.
No. of yrs. over which observation extends	29	29	29	29	29	29	27	27	28
January	84.2	63.1	73.6	108.4 28/21	49.9 1/21	58.5	177.3 22/14	40.4 1/2	318.6
February	84.9	63.4	74.2	107.4 4/23	47.7 1/02	59.7	169.0 4/99	39.8 1/13	270.7
March	81.4	61.0	71.2	106.4 14 22	45.8 8/03	60.6	167.0 19/18	36.7 8/03	268.0
April	76.1	57.1	66.6	99.7 9/10	39.3 20/14	60.4	157.0 8/16	31.0 20/14	219.0
May	68.7	52.6	60.6	90.4 2/07	34.3 11/14	56.1	144.2 8/24	25.3 11/14	176.4
June	63.9	49.5	56.7	81.7 2/14	35.0 30/20	46.7	135.5 9/14	26.5 30/20	143.9
July	62.7	47.7	55.2	76.4 21/21	34.2 7/16	42.2	133.2 13/15	25.1 30/20	167.3
August	63.8	48.0	55.9	81.0 12/14	35.3 31/08	45.7	145.1 29/21	27.9 10/11	187.2
September ..	66.1	50.1	58.1	90.9 30/18	38.9 17/13	52.0	153.6 29/16	29.2 21/16	203.9
October	69.1	52.5	60.8	95.3 30/22	40.5 5/24	54.8	154.0 29/14	30.5 4/17	235.8
November.. ..	75.6	56.6	66.1	104.6 24/13	42.0 1/04	62.6	167.0 30/25	35.5 (*a*)	286.2
December ..	80.7	60.5	70.6	107.9 20/04	48.0 2/10	59.9	168.7 25/15	39.0 12/20	321.7
Year Averages ..	73.1	55.2	64.1	—	—	—	—	—	2798.7
Year Extremes ..	—	—	—	108.4 28/1/21	34.2 7/7/16	74.2	177.3 22/1/14	25.1 30/7/20	—

Humidity, Rainfall, and Dew.

Month.	Vapour Pressure (inches) Mean 9.30 a.m.	Rel. Hum. (%) Mean 9 a.m.	Highest Mean.	Lowest Mean.	Rainfall (inches). Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Dew. Mean No. Days Dew.
No. of yrs. over which observation extends	29	29	29	29	50	50	50	50	50	29
January	0.431	52	61	42	0.34	3	2.17 1879	0.00 (*a*)	1.74 28/79	2.5
February	0.451	54	65	46	0.45	3	2.98 1915	0.00 (*a*)	1.63 26/15	3.2
March	0.432	57	66	46	0.78	4	4.50 1896	0.00 (*a*)	2.06 26/23	3.5
April	0.397	63	72	51	1.58	6	4.97 1882	0.00 1920	2.62 30/04	9.1
May	0.370	72	81	61	4.94	14	12.13 1879	0.98 1903	2.80 20/79	12.2
June	0.336	78	83	68	6.92	17	12.80 1923	2.16 1877	3.90 10/20	12.2
July	0.315	78	84	69	6.45	17	11.29 1917	2.42 1876	3.00 4/91	13.4
August	0.318	73	79	63	5.62	18	10.33 1882	0.46 1902	2.79 7/03	11.8
September ..	0.342	68	76	58	3.40	15	7.84 1922	0.62 1914	1.73 23/09	9.4
October	0.355	62	75	54	2.18	12	7.87 1890	0.49 1892	1.38 15/10	5.3
November.. ..	0.376	55	63	46	0.79	6	2.78 1916	0.00 1891	1.11 30/03	3.7
December ..	0.413	52	62	44	0.58	4	3.05 1888	0.00 1886	1.72 1/88	2.8
Year Totals ..	—	—	—	—	34.03	119	—	—	—	91.2
Year Averages ..	0.371	62	—	—	—	—	—	—	—	—
Year Extremes ..	—	—	84	42	—	—	12.80 6/1923	Nil (*b*)	3.90 10/6/20	—

(*a*) Various years. (*b*) Jan., Feb., March, April, Nov., Dec., various years.

CLIMATOLOGICAL DATA—ADELAIDE, SOUTH AUSTRALIA.

LAT. 34° 56′ S., LONG. 138° 35′ E. HEIGHT ABOVE M.S.L. 140 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.					Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.		Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction.				
No. of yrs. over which observation extends	69	48		48	48	48	56	54	58	44
January	29.915	758	19/99	0.34	7,895	S	8.95	2.3	3.5	8.2
February	29.951	691	22/96	0.29	6,685	S	7.30	2.1	3.5	7.1
March	30.038	628	9/12	0.24	6,639	S	5.81	2.1	3.9	7.1
April	30.122	773	10/96	0.21	6,067	S	3.44	1.5	5.0	4.2
May	30.121	760	9/80	0.21	6,246	N x E	2.02	1.7	5.8	2.0
June	30.095	750	12/78	0.25	6,545	N	1.23	2.1	6.1	1.7
July	30.129	674	25/82	0.24	6,709	N	1.28	1.6	5.8	1.8
August	30.100	773	31/97	0.27	7,119	N N W	1.87	2.1	5.6	2.6
September ..	30.038	720	2/87	0.31	7,292	W	2.84	2.5	5.2	3.1
October	29.996	768	28/98	0.34	7,854	S W x W	4.75	3.3	4.9	3.9
November.. ..	29.975	677	2/04	0.32	7,522	S S W	6.55	3.5	4.6	5.3
December ..	29.919	675	12/91	0.34	7,878	S S W	8.40	2.6	3.8	7.4
Year Totals ..	—	—		—	—	—	54.44	27.4	—	54.4
Year Averages ..	30.033	—		0.28	7,038	S W x S	—	—	4.8	—
Year Extremes ..	—	773	(*a*)	—	—	—	—	—	—	—

(*a*) 10/4/96 and 31/8/97.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).				Extreme Range.	Extreme Temperature (Fahr.).				Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.		Lowest.			Highest in Sun.		Lowest on Grass.		
No. of yrs. over which observation extends	69	69	69	69		69		69	48		65		44
January	86.2	61.6	73.9	116.3	26/58	45.1	21/84	71.2	180.0	18/82	36.5	14/79	309.4
February	86.1	62.1	74.1	113.6	12/99	45.5	23/18	68.1	170.5	10/00	36.7	(*c*)	262.6
March	80.8	58.8	69.8	108.0	12/61	44.8	–/57	63.2	174.0	17/83	33.8	27/80	240.5
April	73.3	54.6	63.9	98.0	10/66	39.6	15/59	58.4	155.0	1/83	30.2	16/17	178.3
May	65.6	50.3	57.9	89.5	4/21	36.9	(*a*)	52.6	148.2	12/79	25.9	10/91	147.8
June	60.3	46.7	53.5	76.0	23/65	32.5	27/76	43.5	138.8	18/79	22.9	12/13	121.8
July	58.9	44.6	51.7	74.0	11/06	32.0	24/08	42.0	134.5	26/90	23.3	25/11	137.2
August	62.0	45.9	53.9	85.0	31/11	32.3	17/11	52.7	140.0	31/92	23.5	7/88	163.8
September ..	66.2	47.9	57.0	90.7	23/82	32.7	4/58	58.0	160.5	23/82	26.2	15/08	182.6
October	72.4	51.4	61.9	102.9	21/22	36.0	–/57	66.9	162.0	30/21	27.8	2/18	227.5
November.. ..	78.6	55.3	67.0	113.5	21/65	40.8	2/09	72.7	166.9	20/78	31.5	2/09	262.7
December ..	83.3	58.9	71.1	114.2	14/76	43.0	(*b*)	71.2	175.7	7/99	32.5	4/84	302.8
Year Averages ..	72.8	53.2	63.0	—		—		—	—		—		2537.0*d*
Year Extremes ..	—	—	—	116.3	26/1/58	32.0	24/7/08	84.3	180.0	18/1/1882	22.9	12/6/1913	—

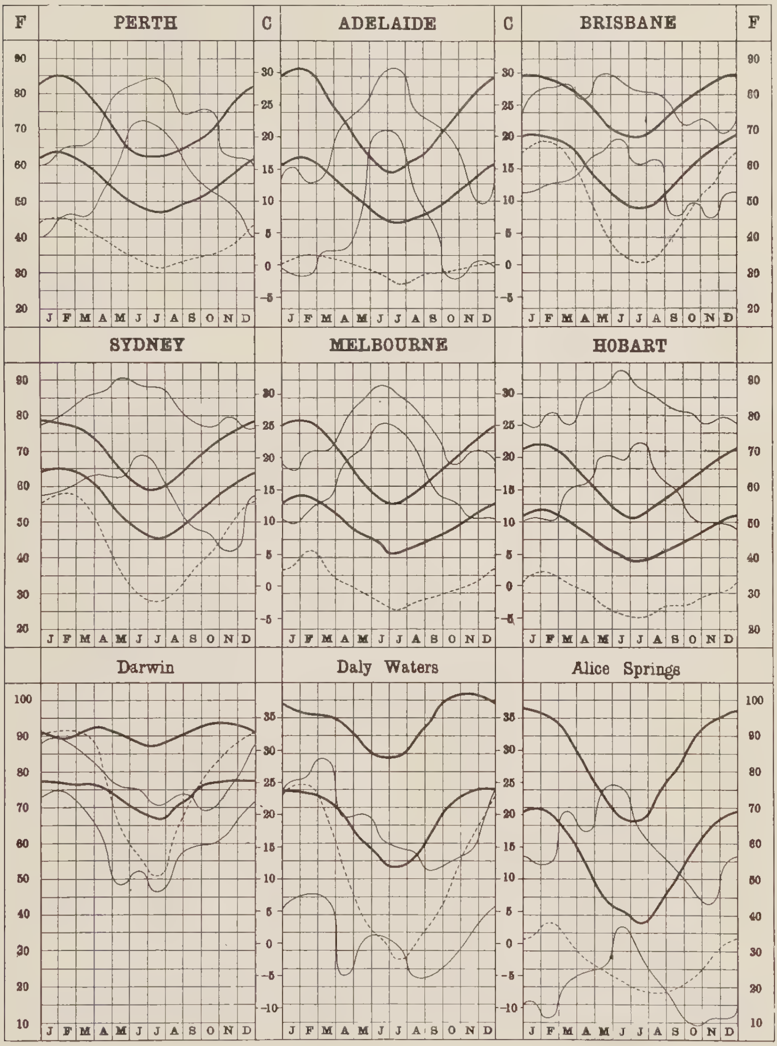
(*a*) 26/1895 and 24/1904. (*b*) 16/1861 and 4/1906. (*c*) 24/78 and 23/18. (*d*) Total for year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure. (inches.)	Rel. Hum. (%)			Rainfall (inches).								Dew.
	Mean 9.30a.m.	Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.		Least Monthly.		Greatest in One Day.		Mean No. Days Dew.
No. of yrs. over which observation extends	58	58	58	58	87	87	87		87		87		54
January	0.336	38	59	30	0.73	4	4.00	1850	Nil	(*a*)	2.30	2/89	4.1
February	0.348	41	56	30	0.72	4	6.09	1925	Nil	(*b*)	5.57	7/25	5.8
March	0.344	47	58	36	1.04	6	4.60	1878	Nil	(*c*)	3.50	5/78	11.2
April	0.335	56	72	37	1.75	9	6.78	1853	0.03	1923	3.15	5/60	14.0
May	0.315	67	76	49	2.76	14	7.75	1875	0.20	1891	2.75	1/53	15.7
June	0.301	77	84	69	3.14	16	8.58	1916	0.42	1886	2.11	1/20	15.8
July	0.276	76	87	68	2.64	16	5.38	1865	0.37	1899	1.75	10/65	17.2
August	0.285	69	77	54	2.50	16	6.24	1852	0.35	1914	2.23	19/51	16.5
September ..	0.291	62	72	44	-2.06	14	5.83	1923	0.45	1896	1.59	20/23	15.5
October	0.292	51	67	29	-1.73	11	3.83	1870	0.17	1914	2.24	16/08	12.8
November.. ..	0.304	43	57	31	1.15	8	3.55	1851	0.04	1885	1.88	28/58	7.0
December ..	0.311	39	50	33	0.99	5	3.98	1861	Nil	1904	2.42	23/13	4.8
Year Totals ..	—	—	—	—	21.21	123	—		—		—		140.4
Year Averages ..	0.311	53	—	—	—	—	—		—		—		—
Year Extremes ..	—	—	87	29	—	—	8.58	6/16	Nil	(*d*)	5.57	7/2/25	—

(*a*) 1848, etc. (*b*) 1848, etc. (*c*) 1859, etc. (*d*) January, February, March, December, various years.

ANNUAL FLUCTUATIONS OF NORMAL MAXIMUM AND MINIMUM TEMPERATURE AND HUMIDITY.



EXPLANATION.—The upper and lower heavy lines in each graph represent the maximum and minimum temperatures respectively. The Fahrenheit temperature scales are shown on the outer edge of the sheet under " F," and the centigrade scales in the two inner columns under " C."

The broken line shows the normal absolute humidity in the form of 9 a.m. vapour pressures for which the figures in the outer " F " columns represent hundredths of an inch of barometric pressure.

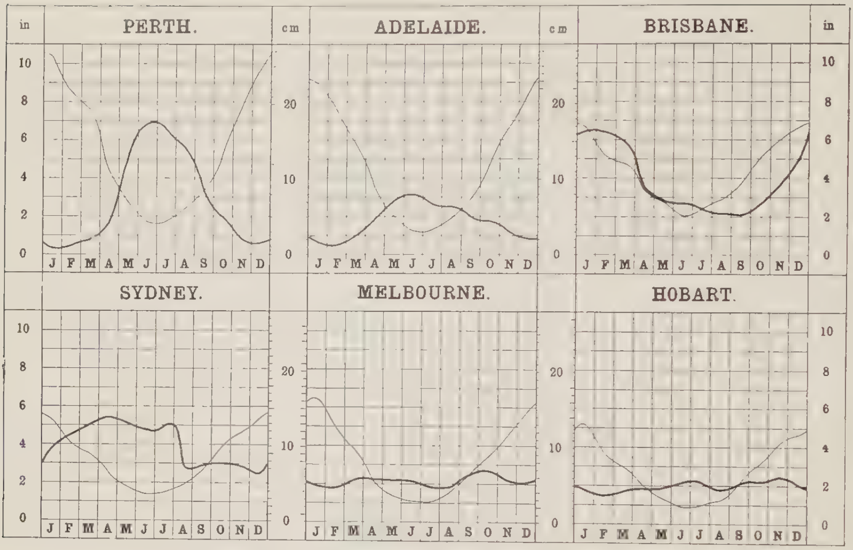
The upper and lower fine lines join the greatest and the least monthly means of relative humidity respectively, the figures under the outer columns " F " indicating percentage values.

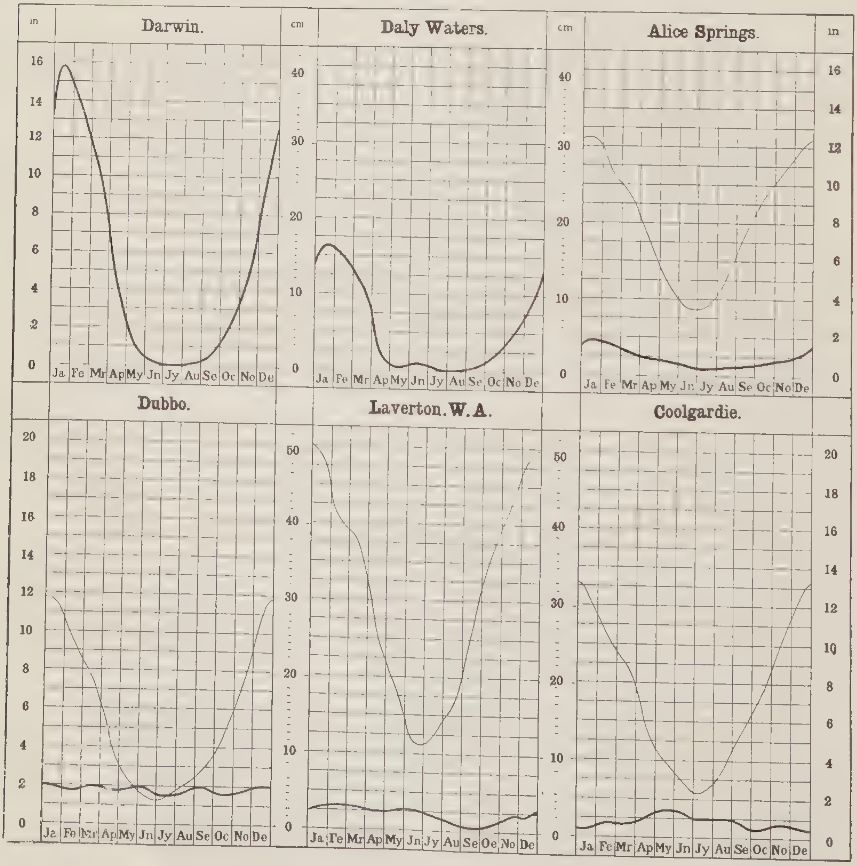
The curves for temperature and vapour pressure joining the mean monthly values serve to show the annual fluctuation of these elements, but the relative humidity graphs joining the extreme values for each month do not indicate any normal annual variation.

Comparison of the maximum and minimum temperature curves affords a measure of the mean diurnal range of temperature. At Perth in the middle of January, for instance, there is normally a range of 21° from 63° F. to 84° F., but in June it is only 15° from 48° F. to 63° F.

The relative humidity curves illustrate the extreme range of the mean monthly humidity over a number of years.

MEAN MONTHLY RAINFALL AND EVAPORATION.





Explanation.—On the preceding graphs thick lines denote rainfall, and thin lines evaporation, and show the fluctuation of the mean rate of fall *per month* throughout the year. The results, plotted from the Climatological Tables herein are shown in inches (see the outer columns), and the corresponding metric scale (centimetres) is shown in the two inner columns. The evaporation is not given for Darwin and Daly Waters.

At Perth, Adelaide, Brisbane, Melbourne, Hobart, Alice Springs, and Coolgardie the results have been obtained from jacketed tanks sunk in the ground. At Sydney and Dubbo sunken tanks without water jackets are used, whilst at Laverton (W.A.) the records are taken from a small portable jacketed evaporation dish of 8 inches in diameter.

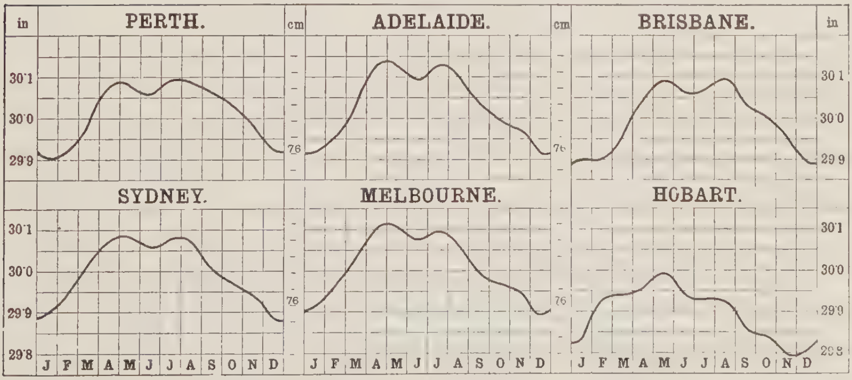
The distance for any date from the zero line to the curve represents the average number of inches, reckoned as per month, of rainfall at that date. Thus, taking the curves for Adelaide in the middle of January the rain falls on the average at the rate of about three-fourths of an inch per month, or, say, at the rate of about 9 inches per year. In the middle of June it falls at the rate of a little over 3 inches per month, or, say, at the rate of about 37 inches per year. At Dubbo, the evaporation is at the rate of nearly 11¾ inches per month about the middle of January, and only about 1½ inches at the middle of June.

The mean annual rainfall and evaporation at the places indicated are given in the appended table.

MEAN ANNUAL RAINFALL AND EVAPORATION.

Place.	Rainfall.	Evaporation.	Place.	Rainfall.	Evaporation.
	In.	In.		In.	In.
Perth ..	34.03	65.83	Darwin ..	61.87	—
Adelaide ..	21.21	54.44	Daly Waters ..	26.48	—
Brisbane ..	45.27	53.29	Alice Springs ..	11.15	94.24
Sydney ..	47.62	38.58	Dubbo ..	21.91	66 37
Melbourne ..	25.65	38.84	Laverton, W.A.	9.69	141.29
Hobart ..	23.81	31.61	Coolgardie ..	10.13	85.25

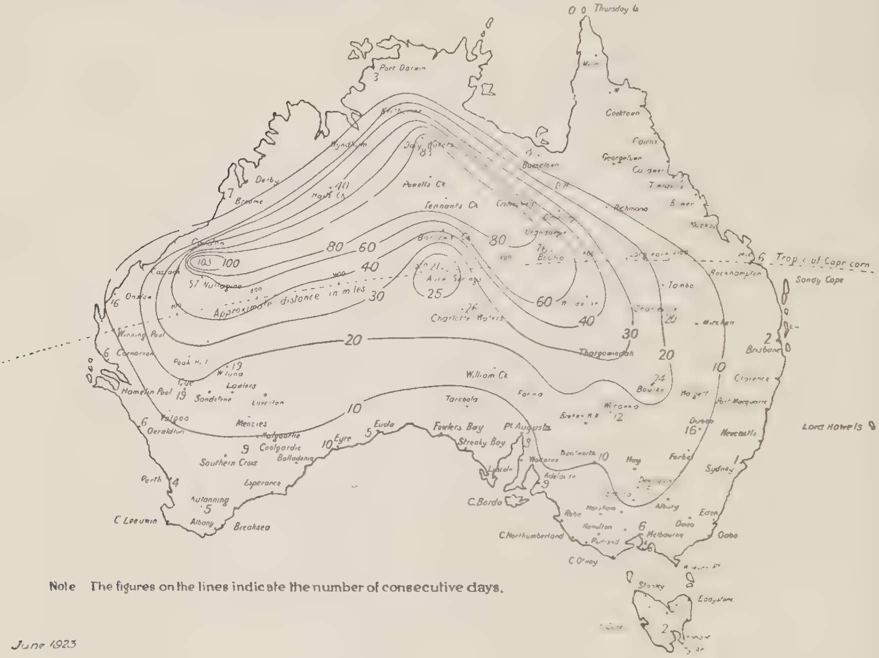
MEAN BAROMETRIC PRESSURE.—CAPITAL CITIES.



Explanation.—The lines representing the yearly fluctuations of barometric pressure at the State capital cities are means for long periods, and are plotted from the Climatological Tables herein. The pressures are shown in inches on about 2½ times the natural scale, and the corresponding pressures in centimetres are also shown in the two inner columns, in which each division represents one millimetre.

Interpretation.—Taking the Brisbane graph for purposes of illustration, it will be seen that the mean pressure in the middle of January is about 29.87 inches, and there are maxima in the middle of May and August of about 30.09 inches.

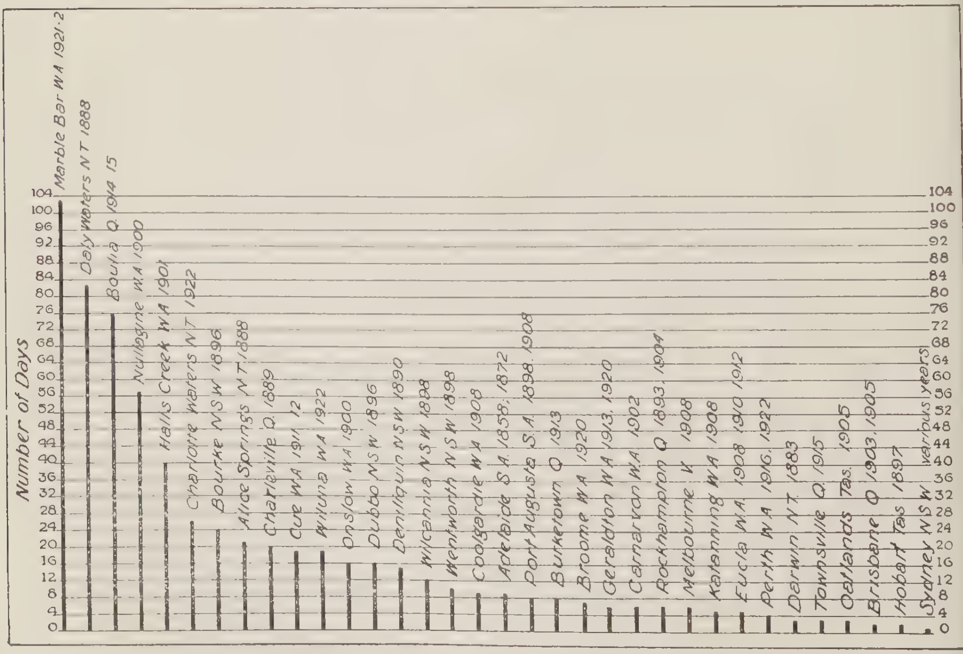
Area affected and period of duration of the Longest Heat Waves when the Maximum Temperature for consecutive 24 hours reached or exeeeded 100° Fah.

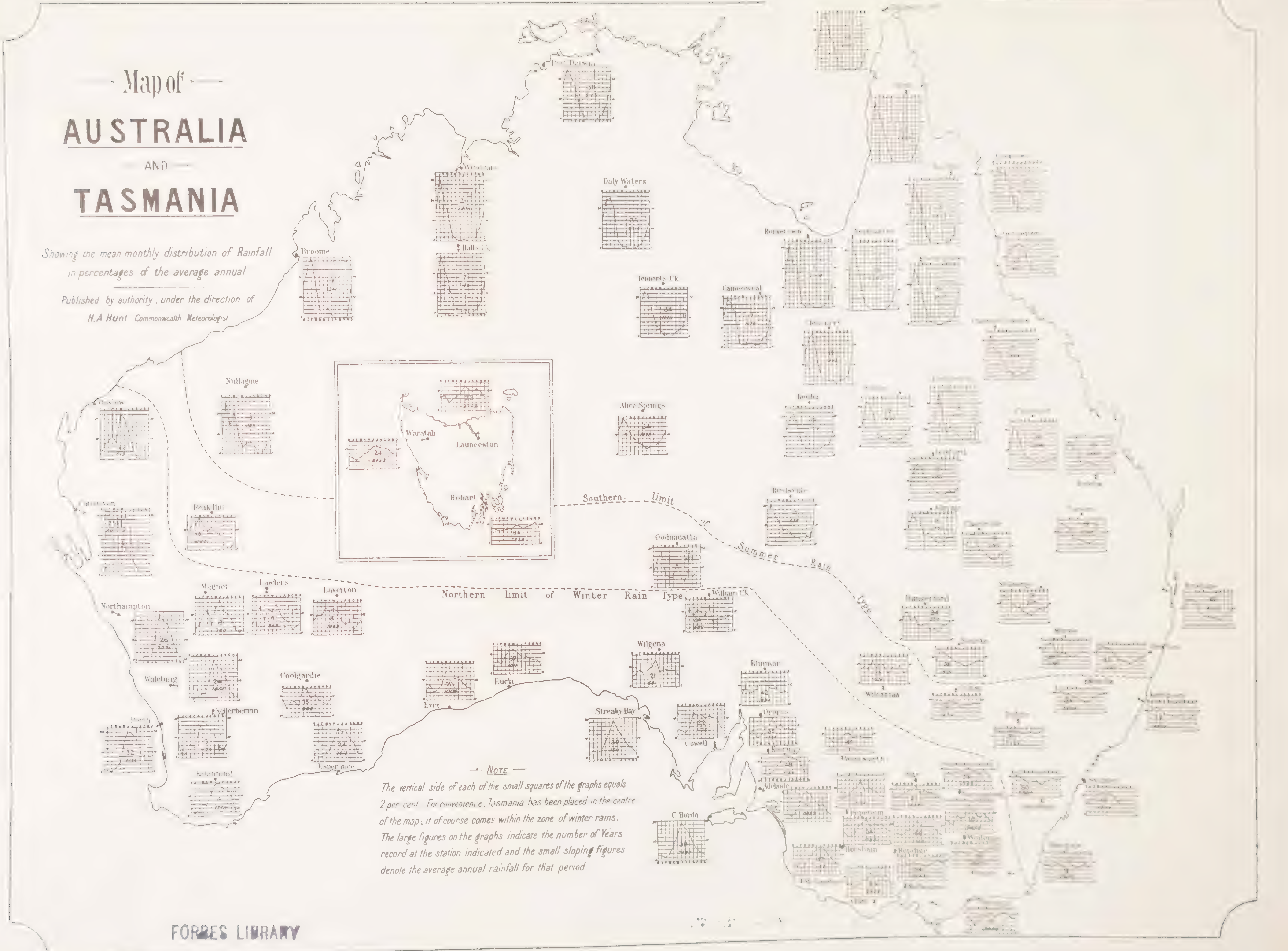

Thursday Is
Port Darwin
3
Wyndham
Daly Waters
Derby
Broome
7
Halls Ck
40
Powells Ck
Tennants Ck
Cooktown
Cairns
Georgetown
Burketown
Richmond
80
60
40
103
100
Onslow
16
57 Nullagine
Approximate distance in miles
30
21
Alice Springs
25
26
Charlotte Waters
60
40
30
20
Tambo
Rockhampton
6
Tropic of Capricorn
Sandy Cape
2
Brisbane
Winning Pool
6
Carnarvon
Peak Hill
19
Wiluna
Cue
19
Lawlers
Hamelin Pool
Sandstone
20
William Ck
Thargomindah
24
Bourke
10
Clarence
Port Macquarie
Farina
Tarcoola
Wilcannia
12
Dubbo
16
Newcastle
Lord Howe Is
10
Yalgoo
6
Geraldton
Menzies
Kalgoorlie
Coolgardie
9
Southern Cross
Eyre
10
5
Eucla
Fowlers Bay
Streaky Bay
Pt Augusta
3
Wentworth
10
Hay
Forbes
Sydney
1
Perth
4
Katanning
5
Esperance
Albany
Breaksea
C Leeuwin
C. Borda
Adelaide
9
Robe
Hamilton
Portland
6
Melbourne
Albury
Eden
Gabo
C Northumberland
C Otway
Stanley
Eddystone
2

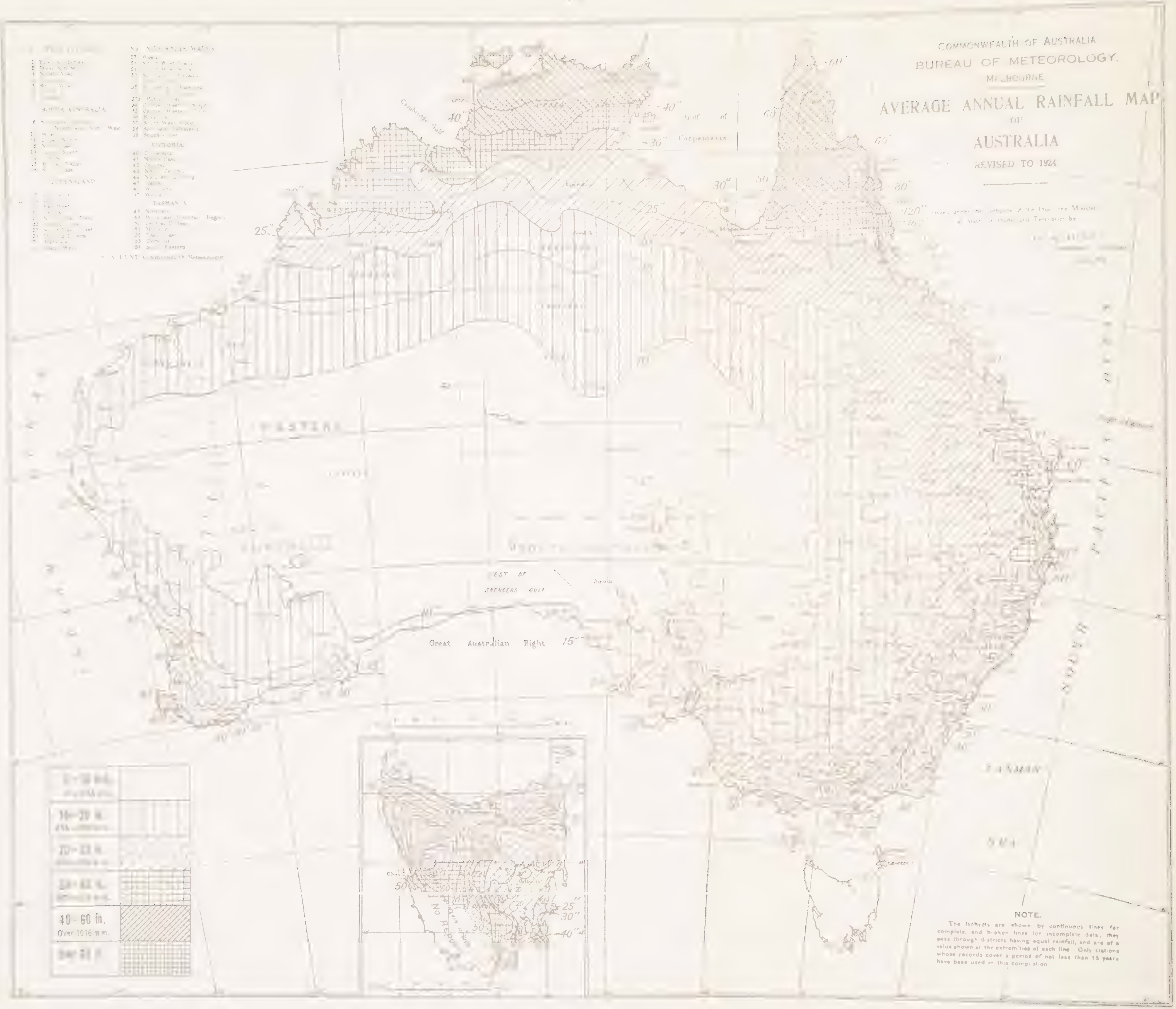
Note The figures on the lines indicate the number of consecutive days.

June 1923

Greatest number of consecutive days on which the Shade Temperature was over 100° Fah. at the places indicated.







COMMONWEALTH OF AUSTRALIA
BUREAU OF METEOROLOGY.
MELBOURNE

AVERAGE ANNUAL RAINFALL MAP OF AUSTRALIA

REVISED TO 1924.

NOTE.

The Isohyets are shown by continuous lines for complete, and broken lines for incomplete data, they pass through districts having equal rainfall, and are of a value shown at the extremities of each line. Only stations whose records cover a period of not less than 15 years have been used in this compilation.

Gulf of Carpentaria
Cambridge Gulf
Great Australian Bight
PACIFIC OCEAN
SOUTH OCEAN
TASMAN SEA
WESTERN
AUSTRALIA
SOUTH AUSTRALIA
WEST OF SPENCERS GULF
40—60 in.
Over 1016 mm.
60"
40"
30"
25"
20"
15"
80"
120"
160"
50
No Reg

CLIMATOLOGICAL DATA—BRISBANE, QUEENSLAND.

LAT. 27° 28′ S., LONG. 150° 2′ E. HEIGHT ABOVE M.S.L. 137 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. Greatest Number of Miles in One Day.	Wind. Mean Hourly Pressure. (lbs.)	Wind. Total Miles.	Wind. Prevailing Direction.	Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m. & 9 p.m.	No. of Clear Days.
No. of yrs. over which observation extends	39	15	15	15	39	17	39	34	17
January	29.868	361 1/22	0.12	4,710	E & S E	6.431	6.0	5.7	3.3
February	29.901	347 5/22	0.14	4,602	S E	5.205	5.3	5.7	1.9
March	29.957	348 10/25	0.10	4,399	S E & S	4.890	4.6	5.2	5.1
April	30.051	400 3/25	0.10	4,085	S	3.902	3.2	4.5	7.7
May	30.083	307 20/22	0.08	3,827	S	2.854	3.3	4.3	8.8
June	30.066	400 12/24	0.08	3,820	S	2.213	2.2	4.1	8.8
July	30.073	359 2/23	0.08	3,877	S to W	2.509	2.4	3.7	11.5
August	30.097	331 6/23	0.09	4,102	S	3.058	3.6	3.4	11.8
September ..	30.037	322 14/23	0.08	3,818	S	3.979	5.9	3.5	12.2
October	30.005	325 25/18	0.10	4,221	N E	5.422	6.9	4.1	8.4
November ..	29.958	274 18/23	0.12	4,509	N E	5.999	8.4	4.7	6.6
December ..	29.889	308 24/24	0.13	4,872	N E	6.831	8.8	5.3	3.7
Year Totals ..	—	—	—	—	S to E and N E	53.293	60.6	4.5	89.8
Year Averages ..	29.999	—	0.10	4,237		—	—	—	—
Year Extremes ..	—	400 3/4/25	—	—		—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.). Mean Max.	Mean Temperature (Fahr.). Mean Min.	Mean Temperature (Fahr.). Mean.	Extreme Shade Temperature (Fahr.). Highest.	Extreme Shade Temperature (Fahr.). Lowest.	Extreme Range.	Extreme Temperature (Fahr.). Highest in Sun.	Extreme Temperature (Fahr.). Lowest on Grass.	Mean Hours of Sunshine.
No. of yrs. over which observation extends	39	39	39	39	39	39	39	39	17
January	85.4	68.8	77.1	108.9 14/02	58.8 4/93	50.1	166.4 10/17	49.9 4/93	220.7
February	84.5	68.5	76.5	105.7 21/25	58.7 (*a*)	47.0	165.2 6/10	49.3 9/89	204.8
March	82.3	66.3	74.3	99.4 5/19	52.4 29/13	47.0	161.7 4/25	45.4 29/13	205.5
April	76.4	61.6	69.0	95.2 (*b*)	44.4 25/25	50.8	153.8 11/16	36.7 24/25	204.6
May	73.6	55.4	64.5	90.3 21/23	41.3 24/99	49.0	147.0 1/10	29.8 8/97	197.2
June	69.4	51.0	60.2	88.9 19/18	36.3 29/08	52.6	136.0 3/18	25.4 23/88	171.8
July	68.4	48.5	58.4	83.4 28/98	36.1 (*c*)	47.3	146.1 20/15	23.9 11/90	199.7
August	70.8	49.8	60.3	87.5 28/07	37.4 6/87	50.1	141.9 20/17	27.1 9/99	225.0
September ..	75.7	54.8	65.2	95.2 16/12	40.7 1/96	54.5	155.5 26/03	30.4 1/89	235.3
October	79.7	59.9	69.8	101.4 18/93	43.3 3/99	58.1	157.4 31/18	34.9 8/89	252.5
November ..	82.8	64.2	73.5	106.1 18/13	48.5 2/05	57.6	162.3 7/89	38.8 1/05	241.6
December ..	85.5	67.6	76.5	105.9 26/93	56.4 13/12	49.5	160.4 7/14	49.1 3/94	242.2
Year Averages ..	77.9	59.7	68.8	—	—	72.8	—	—	2600.9
Year Extremes ..	—	—	—	108.9 14/1/02	36.1 (*d*)	—	166.4 10/1/17	23.9 11/7/90	—

(*a*) 10 and 11/04. (*b*) 9/96 and 5/03. (*c*) 12/94 and 2/96. (*d*) 12/7/94 and 2/7/96.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches). Mean 9 a.m.	Rel. Hum. (%) Mean 9 a.m.	Rel. Hum. (%) Highest Mean.	Rel. Hum. (%) Lowest Mean.	Rainfall (inches). Mean Monthly.	Rainfall (inches). Mean No. of Days Rain.	Rainfall (inches). Greatest Monthly.	Rainfall (inches). Least Monthly.	Rainfall (inches). Greatest in One Day.	Dew. Mean No. Days Dew.
No. of yrs. over which observation extends	39	39	39	39	74	66	74	74	74	39
January	0.653	66	79	53	6.33	14	27.72 1895	0.32 1919	18.31 21/87	6.4
February	0.649	69	82	55	6.26	14	40.39 1893	0.58 1849	8.36 16/93	6.5
March	0.629	72	85	56	5.81	15	34.04 1870	nil 1849	11.18 14/08	9.9
April	0.535	72	80	60	3.58	12	15.28 1867	0.04 1897	4.47 13/16	12.3
May	0.424	74	85	63	2.87	10	13.85 1876	nil 1846	5.62 9/79	13.5
June	0.355	75	84	67	2.73	8	14.03 1873	nil 1847	6.01 9/93	11.5
July	0.333	74	81	61	2.33	8	8.46 1889	nil 1841	3.54 16/89	12.8
August	0.348	70	80	60	2.12	7	14.67 1879	nil (*a*)	4.89 12/87	10.8
September ..	0.415	65	76	47	2.05	8	5.43 1886	0.10 1907	2.46 2/94	10.7
October	0.478	61	72	48	2.54	9	9.99 1882	0.14 1900	1.95 20/89	8.8
November ..	0.540	60	72	45	3.75	10	12.41 1917	nil 1842	4.46 16/86	5.8
December ..	0.617	63	69	52	4.90	12	13.99 1910	0.35 1865	6.60 28/71	5.3
Year Totals ..	—	—	—	—	45.27	127	—	—	—	114.3
Year Averages ..	0.479	69	—	—	—	—	—	—	—	—
Year Extremes ..	—	—	85	45	—	—	40.39 2/93	nil (*b*)	18.31 21/1/87	—

(*a*) 1862, 1869, 1880. (*b*) March, May, June, July, August, and November, various years.

CLIMATOLOGICAL DATA—SYDNEY, NEW SOUTH WALES.

LAT. 33° 52′ S., LONG. 151° 12′ E. HEIGHT ABOVE M.S.L., 138 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.				Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.	Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction.				
No. of yrs. over which observation extends	67	59	59	59	59	46	66	64	62
January	29.898	721 1/71	0.35	8,050	N E	5.288	4.8	5.8	2.4
February	29.943	871 12/69	0.31	6,895	N E	4.156	4.3	6.0	1.8
March	30.012	943 20/70	0.24	6,690	N E	3.583	4.1	5.5	2.3
April	30.075	803 6/82	0.21	6,051	N E	2.563	3.8	5.0	3.3
May	30.080	758 6/98	0.21	6,264	W	1.771	3.3	4.9	3.8
June	30.058	712 7/00	0.27	6,811	W	1.423	2.2	4.8	4.2
July	30.074	930 17/79	0.27	7,018	W	1.519	2.3	4.4	5.1
August	30.071	756 22/72	0.25	6,776	W	1.885	3.1	4.0	5.5
September ..	30.005	964 6/74	0.29	7,021	W	2.661	4.1	4.3	4.7
October	29.969	926 4/72	0.31	7,662	N E	3.839	4.9	4.9	3.1
November.. ..	29.939	720 13/68	0.32	7,493	N E	4.555	5.4	5.5	2.1
December ..	29.882	938 3/84	0.34	7,916	N E	5.343	5.7	5.6	2.4
Year { Totals ..	—	—	—	—	—	38.584	48.0	—	40.7
Year { Averages ..	30.000	—	0.28	7,054	N E	—	—	5.1	—
Year { Extremes ..	—	964 6/9/74	—	—	—	—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).		Extreme Range.	Extreme Temperature (Fahr.).		Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of yrs. over which observation extends	67	67	67	67	67	67	64	67	15
January	78.4	64.8	71.6	108.5 13/96	51.2 14/65	57.3	164.3 26/15	43.7 6/25	206.8
February	77.6	64.9	71.2	101.9 18/23	49.3 28/63	52.6	156.5 7/64	43.4 25/91	185.8
March	75.7	62.9	69.3	102.6 3/69	48.8 14/86	53.8	158.0 19/11	39.9 17/13	192.5
April	71.3	58.1	64.7	91.0 20/22	44.6 27/64	46.4	144.1 10/77	33.3 24/09	153.9
May	65.4	52.2	58.8	86.0 1/19	40.2 22/59	45.8	129.7 1/96	29.3 25/17	137.8
June	61.0	48.3	54.7	79.8 2/23	38.0 5/20	41.8	125.5 2/23	28.1 24/11	126.9
July	59.4	45.9	52.6	74.9 17/71	35.9 12/90	39.0	124.7 19/77	24.0 4/93	143.7
August	62.5	47.5	55.0	82.0 31/84	36.8 3/72	45.2	149.0 30/78	26.1 4/09	185.5
September ..	66.9	51.4	59.2	92.3 27/19	40.8 18/64	51.5	142.2 12/78	30.1 17/05	193.2
October	71.2	55.8	63.5	99.7 19/98	42.3 3/18	57.4	151.9 (*a*)	32.7 9/05	210.4
November.. ..	74.4	59.6	67.0	102.7 21/78	45.8 1/05	56.9	158.5 28/99	36.0 6/06	201.0
December ..	77.3	62.9	70.1	107.5 31/04	48.4 3/24	59.1	164.5 27/89	41.4 3/24	-205.6
Year { Averages ..	70.1	56.2	63.2	—	—	—	—	—	2143.1
Year { Extremes ..	—	—	—	108.5 13/1/96	35.9 12/7/90	72.6	164.5 27/12/89	24.0 4/7/93	—

(*a*) 30 and 31/14.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches.)	Rel. Hum. (%)			Rainfall (inches).					Dew.
	Mean 9 a.m.	Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Mean No. Days Dew.
No. of yrs. over which observation extends	67	67	67	67	67	67	67	67	67	67
January	0.556	67	78	58	3.67	14	15.26 1911	0.42 1888	7.08 13/11	1.2
February	0.567	70	81	59	4.29	14	18.56 1873	0.34 1902	8.90 25/73	2.1
March	0.534	72	85	62	4.89	15	18.70 1870	0.42 1876	6.52 9/13	3.4
April	0.459	76	87	63	5.37	14	24.49 1861	0.06 1868	7.52 29/60	5.6
May	0.335	74	90	63	5.27	15	23.03 1919	0.18 1860	8.36 28/89	6.3
June	0.292	76	89	68	4.80	13	16.30 1885	0.19 1904	5.17 16/84	5.4
July	0.269	75	88	65	4.90	12	13.21 1900	0.12 1862	5.72 28/08	5.4
August	0.294	71	84	56	3.04	11	14.89 1899	0.04 1885	5.33 2/60	5.0
September ..	0.352	67	79	49	2.87	12	14.04 1879	0.08 1882	5.69 10/79	3.5
October	0.402	63	77	46	2.87	12	11.14 1916	0.21 1867	6.37 13/02	3.0
November.. ..	0.466	64	79	42	2.85	12	9.88 1865	0.07 1915	4.23 19/00	2.1
December ..	0.530	66	77	52	2.80	13	15.82 1920	0.23 1913	4.75 13/10	1.4
Year { Totals ..	—	—	—	—	47.62	157	—	—	—	44.4
Year { Average ..	0.421	70	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	90	42	—	—	24.49 April/1861	0.04 Aug./1885	8.90 25/2/73	—

CLIMATOLOGICAL DATA—MELBOURNE, VICTORIA.

LAT. 37° 49′ S., LONG. 144° 58′ E. HEIGHT ABOVE M.S.L., 115 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.					Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.		Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction.				
No. of yrs. over which observation extends.	68	52		52	52	52	53	18	68	18
January	29.910	583	10/97	0.27	7,269	S W, S E	6.419	2.0	5.1	7.5
February	29.960	566	8/68	0.25	63.08	S W, S E	5.044	2.7	5.0	6.7
March	30.033	677	9/81	0.20	6,275	S W, S E	3.973	1.6	5.5	5.1
April	30.106	597	7/68	0.19	5,666	S W, N W	2.386	0.8	5.8	4.6
May	30.101	693	12/65	0.19	5,849	N W, N E	1.464	0.6	6.5	3.1
June	30.073	761	13/76	0.22	6,345	N W, N E	1.089	0.7	6.7	2.2
July	30.093	755	8/74	0.21	6,305	N W, N E	1.048	0.5	6.3	3.1
August	30.067	637	14/75	0.24	6,762	N W, N E	1.469	1.1	6.3	3.0
September ..	29.997	617	11/72	0.26	6,943	N W, S W	2.300	1.6	6.1	3.7
October	29.964	899	5/66	0.27	7,231	S W, N W	3.348	2.1	6.0	4.0
November.. ..	29.950	734	13/66	0.27	6,953	S W, S E	4.539	2.4	5.9	3.9
December.. ..	29.898	655	1/75	0.27	7,393	S W, S E	5.766	1.8	5.5	4.4
Year Totals ..	—		—	—	—	—	38.845	17.9	—	51.3
Year Averages ..	30.012		—	0.24	6,608	S W, NW	—	—	5.9	—
Year Extremes ..	—	899	5/10/66	—	—	—	—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).				Extreme Range.	Extreme Temperature (Fahr.).				Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.		Lowest.			Highest in Sun.		Lowest on Grass.		
No. of yrs. over which observation extends	70	70	70	70		70		70	66		66		44
January	78.1	56.8	67.4	111.2	14/62	42.0	28/85	69.2	178.5	14/62	30.2	28/85	266.7
February	78.0	57.1	67.5	109.5	7/01	40.2	24/24	69.3	167.5	15/70	30.9	6/91	243.3
March	74.3	54.6	64.4	105.5	2/93	37.1	17/84	68.4	164.5	1/68	28.9	(*b*)	207.7
April	68.2	50.9	59.5	94.0	(*a*)	34.8	24/88	59.2	152.0	8/61	25.0	23/97	163.6
May	61.5	46.7	54.1	83.7	7/05	29.9	29/16	53.8	142.6	2/59	21.1	26/16	139.9
June	56.8	44.1	50.4	72.2	1/07	28.0	11/66	44.2	129.0	11/61	20.4	17/95	110.7
July	55.5	41.8	48.6	68.4	24/78	27.0	21/69	41.4	125.8	27/80	20.5	12/03	106.2
August	58.7	43.3	51.0	77.0	20/85	28.3	11/63	48.7	137.4	29/69	21.3	14/02	155.8
September ..	62.5	45.6	54.1	85.0	19/19	31.1	16/08	53.9	142.1	20/67	22.8	8/18	171.6
October	67.0	48.2	57.6	98.4	24/14	32.1	3/71	66.2	154.3	28/68	24.8	22/18	206.8
November.. ..	71.3	51.2	61.3	105.7	27/94	36.5	2/96	69.2	159.6	29/65	24.6	2/96	242.9
December.. ..	75.3	54.3	64.8	110.7	15/76	40.0	4/70	70.7	170.3	20/69	33.3	1/04	256.0
Year Averages ..	67.3	49.5	58.4	—		—		—	—		—		*c*2271.2
Year Extremes ..	—	—	—	111.2	14.1.62	27.0	21/7/69	84.2	178.5	14/1/62	20.4	17/6/95	—

(*a*) 6/1865 and 17/1922. (*b*) 17/1884 and 20/1897. (*c*) Total for year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches)	Rel. Hum. (%)			Rainfall (inches).								Dew.
	Mean 9 a.m.	Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.		Least Monthly.		Greatest in One Day.		Mean No. Days Dew.
No. of yrs. over which observation extends	18	18	18	18	70	70	70		70		67		18
January	0.386	58	65	50	1.89	8	5.68	1904	0.04	1878	2.97	9/97	2.7
February	0.416	62	69	53	1.73	7	6.24	1904	0.03	1870	3.37	18/19	2.9
March	0.376	64	71	57	2.20	9	7.50	1911	0.18	1859	3.55	5/19	7.3
April	0.336	71	78	66	2.20	11	6.71	1901	Nil	1923	2.28	22/01	8.7
May	0.305	79	86	71	2.17	13	4.31	1862	0.45	1901	1.85	7/91	9.4
June	0.276	84	89	77	2.07	14	4.51	1859	0.73	1877	1.74	21/04	8.7
July	0.260	82	86	76	1.85	14	7.02	1891	0.57	1902	2.71	12/91	9.4
August	0.269	76	82	70	1.88	14	4.04	1924	0.48	1903	1.94	26/24	8.4
September ..	0.291	69	76	60	2.45	14	7.93	1916	0.52	1907	2.62	12/80	6.0
October	0.303	62	67	53	2.64	13	7.61	1869	0.29	1914	3.00	17/69	6.1
November.. ..	0.332	59	69	52	2.26	11	6.71	1916	0.25	1895	2.57	16/76	1.9
December.. ..	0.357	57	69	51	2.31	9	7.18	1863	0.11	1904	2.62	28/07	1.9
Year Totals ..	—	—	—	—	25.65	137	—		—		—		73.4
Year Average ..	0.321	68	—	—	—	—	—		—		—		—
Year Extremes ..	—	—	89	50	—	—	7.93	9/1916	Nil	4/1923	3.55	5/3/19	—

CLIMATOLOGICAL DATA—HOBART, TASMANIA.

LAT. 42° 53′ S., LONG. 147° 20′ E. HEIGHT ABOVE M.S.L., 177 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.						Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.		Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction. 9 a.m.	Prevailing Direction. 3 p.m.				
No. of yrs. over which observation extends	41	15		15	15	20		15	18	63	19
January	29.829	500	30/16	0.19	5,951	N N W	S E	4.973	1.0	6.0	2.6
February	29.921	393	19/13	0.14	4,623	N N W	S E	3.689	1.4	6.0	2.4
March	29.939	407	16/21	0.13	4,947	N N W	S E	2.982	1.3	5.9	2.3
April	29.967	475	12/22	0.14	4,907	N N W	N W	1.990	0.8	6.1	1.8
May	29.986	411	3/16	0.12	4,699	N N W	N N W	1.350	0.6	6.0	2.2
June	29.946	569	27/20	0.13	4,693	N N W	N N W	0.890	0.7	6.1	2.0
July	29.932	425	16/21	0.12	4,757	N N W	N N W	0.887	0.6	5.8	2.5
August	29.930	508	3/25	0.13	4,925	N N W	N N W	1.254	0.6	5.9	2.1
September ..	29.842	516	26/15	0.18	5,509	N N W	N W	1.977	0.8	6.1	1.6
October	29.830	461	8/12	0.19	5,886	N N W	S E	3.120	0.9	6.3	1.5
November ..	29.804	508	18/15	0.20	5,838	N N W	S E	3.998	0.9	6.3	1.5
December ..	29.807	486	30/20	0.18	5,762	N N W	S E	4.504	1.1	6.2	1.1
Year Totals ..	—	—		—	—	—		31.614	10.7	—	23.6
Year Averages ..	29.894	—		0.15	5.208	N N W	S E & N N W	—	—	6.0	—
Year Extremes ..	—	569	27/6/20	—	—	—		—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).				Extreme Range.	Extreme Temperature (Fahr.).				Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.		Lowest.			Highest in Sun.		Lowest on Grass.		
No. of yrs. over which observation extends	55	55	55	79		79		79	38		58		31
January	71.2	52.9	62.0	105.0	1/00	40.3	(a)	64.7	160.0	(b)	30.6	19/97	210.2
February	71.3	53.3	62.3	104.4	12/99	39.0	20/87	65.4	165.0	24/98	28.3	–/87	176.6
March	67.9	50.8	59.4	98.8	5/46	36.0	31/05	62.8	150.0	3/05	27.5	30/02	174.4
April	62.7	47.6	55.2	90.0	2/56	30.0	25/56	60.0	142.0	18/93	25.0	–/86	140.5
May	57.3	43.7	50.5	77.8	5/21	29.2	20/02	48.6	128.0	(c)	20.0	19/02	131.6
June	52.8	41.0	46.9	75.0	7/74	28.0	22/79	47.0	122.0	12/94	21.0	6/87	103.7
July	51.9	39.3	45.6	72.0	22/77	27.0	18/66	45.0	121.0	12/93	18.7	16/86	124.5
August	55.0	41.0	48.0	77.0	3/76	30.0	10/73	47.0	129.0	–/87	20.1	7/09	143.8
September ..	58.7	43.2	51.0	80.0	9/72	30.0	12/41	50.0	138.0	23/93	22.3	20/14	145.8
October	62.7	45.4	54.0	92.0	24/14	32.0	12/89	60.0	156.0	–/93	23.8	(d)	169.8
November ..	66.1	48.2	57.2	98.0	20/88	35.2	5/13	62.8	154.0	19/92	26.0	1/08	199.1
December ..	69.3	51.2	60.2	105.2	30/97	38.0	13/06	67.2	157.0	30/18	27.2	–/86	196.6
Year Averages ..	62.2	46.5	54.4	—		—		—	—		—		1916.6[e]
Year Extremes ..	—	—	—	105.2	30/12/97	27.0	18/7/66	78.2	165.0	24/2/98	18.7	16/7/86	—

(a) 3/72 and 2/06. (b) 5/86 and 13/05. (c) –/88 and –/92. (d) 1/86 and –/99. (e) Total for Year.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches) Mean 9 a.m.	Rel. Hum. (%)			Rainfall (inches).								Dew.
		Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.		Least Monthly.		Greatest in One Day.		Mean No. Days Dew.
No. of yrs. over which observation extends	42	42	42	42	83	82	83		83		59		16
January	0.348	63	77	51	1.85	10	5.91	1893	0.03	1841	2.96	30/16	0.7
February	0.356	65	80	51	1.46	8	9.15	1854	0.07	1847	4.50	25/54[a]	1.8
March	0.328	68	78	58	1.71	10	7.60	1854	0.02	1843	2.79	5/19	4.6
April	0.307	73	84	61	1.86	12	6.50	1909	0.07	1904	5.02	20/09	10.4
May	0.267	78	88	68	1.88	13	6.37	1905	0.10	1843	3.22	14/58	13.1
June	0.245	82	92	68	2.22	14	8.15	1889	0.22	1852	4.11	14/89	8.6
July	0.234	80	88	72	2.18	14	6.02	1922	0.30	1850	2.51	18/22	8.3
August	0.249	77	85	64	1.84	14	10.16	1858	0.23	1854	4.35	12/58	8.6
September ..	0.266	71	82	60	2.09	14	7.14	1844	0.39	1847	3.50	29/44	4.7
October	0.273	66	80	51	2.24	15	6.67	1906	0.26	1850	2.58	4/06	3.0
November ..	0.296	63	78	50	2.50	14	8.92	1849	0.16	1868	3.97	6/49	1.2
December ..	0.312	61	79	49	1.98	11	9.00	1875	0.11	1842	2.48	13/16	0.9
Year Totals ..	—	—	—	—	23.81	149	—		—		—		65.9
Year Averages ..	0.282	70	—	—	—	—	—		—		—		—
Year Extremes ..	—	—	92	49	—	—	10.16	8/1858	0.02	3/1843	5.02	20/4/09	—

(a) 4.18 on 26/54 also.

CHAPTER III.

GENERAL GOVERNMENT.

§ 1. Scheme of Parliamentary Government.

1. **General.**—The legislative power of the Commonwealth is vested in the Parliament of the Commonwealth, which consists of the Sovereign, the Senate, and the House of Representatives. The Sovereign is represented throughout the Commonwealth by the Governor-General who, subject to the Constitution of the Commonwealth, has such powers and functions as the Sovereign is pleased to assign to him. In each State there is a State Governor, who is the representative of the Sovereign for the State, and who exercises such powers within the State as are conferred upon him by the Letters Patent which constitute his office, and by the instructions which inform him in detail of the manner in which his duties are to be fulfilled. The Legislature in each State was bi-cameral till 1922, in which year the Queensland Parliament became uni-cameral. In the bi-cameral States it consists of (*a*) a Legislative Council and (*b*) a Legislative Assembly, or House of Assembly. In Queensland the Legislative Assembly constitutes the legislature. In the Commonwealth Parliament the Upper House is known as the Senate, and in the State Parliaments as the Legislative Council. The Lower House in the bi-cameral States is known as follows:—In the Commonwealth Parliament as the House of Representatives, in the State Parliaments of New South Wales, Victoria, and Western Australia as the Legislative Assembly, and in the State Parliaments of South Australia and Tasmania as the House of Assembly. The legislative powers of these Parliaments are delimited by the Commonwealth and the State Constitutions. The Assembly (Queensland as pointed out above is now uni-cameral), which is the larger, is always elective, the qualifications for the franchise varying in character. The Council is, in the case of New South Wales, nominated by the Governor in Council; in other States it is elective, the constituencies being differently arranged and some property or special qualification for the electorate being required. In the Federal Parliament, the qualifications for the franchise are identical for both Houses. A brief account of the constitutional history of each of the States is given in Chapter I., and a conspectus of the Constitutions of the Commonwealth and States in Year Book No. 13, pp. 927 to 951. The information given therein respecting Queensland must of course be considerably modified in view of the abolition of the Upper House in 1922.

2. **Powers and Functions of the Governor-General and of the State Governors.**—A detailed statement of the powers and functions of the Governor-General and of the State Governors will be found in preceding issues of the official Year Book (see No. 18, pp. 78 to 80), but considerations of space preclude the repetition of this information in the present volume.

3. **Governor-General and State Governors.**—The present Governor-General is the Right Honourable JOHN LAWRENCE, BARON STONEHAVEN, P.C., G.C.M.G., D.S.O. He assumed office on the 8th October, 1925.

The following is a list of the Governors of the various States of the Commonwealth:—

New South Wales ..	Admiral SIR DUDLEY RAWSON STRATFORD DE CHAIR, K.C.B., M.V.O.
Victoria	Lieut.-Colonel the Rt. Hon. ARTHUR HERBERT TENNYSON, BARON SOMERS, K.C.M.G., D.S.O., M.C.
Queensland ..	Hon. WILLIAM LENNON, Lieutenant-Governor.
South Australia ..	Lieut.-General SIR GEORGE TOM MOLESWORTH BRIDGES, K.C.B., K.C.M.G., D.S.O.
Western Australia ..	Colonel SIR WILLIAM ROBERT CAMPION, K.C.M.G., D.S.O.
Tasmania	Captain SIR JAMES O'GRADY, K.C.M.G., O.B.E., J.P.

4. **The Cabinet and Executive Government.**—(i) *General.* The sections of the Commonwealth Constitution Act dealing with the Executive Government will be found on page 26 hereinbefore. In both the Commonwealth and the State Legislatures the forms of government have been founded on their prototypes in the Imperial Government.

and the relations established between the Ministry and the representatives of the people are in accordance with those prevailing in Great Britain. The executive powers in the Commonwealth are vested in the Governor-General in Council, and in the State Governments in the Governor in Council. The Executive Council in the Commonwealth and in the majority of the States is practically co-extensive with a group of departmental chiefs, who are usually spoken of as the Cabinet, and who change with the rise and fall of party majorities. In the Commonwealth Government, however, as well as in the States of Victoria and Tasmania, the Cabinet on leaving office remain members of the Executive Council, though they no longer attend its meetings, and it is in fact an essential feature of the Cabinet system of Government that they should not do so, except to assist the Governor in transacting purely formal business, or to advise on non-political questions.

(ii) *The Executive Council.* This body is composed of the Governor and the Ministers of State holding office for the time being. The latter are sworn both as Executive Councillors and as Ministers controlling the different administrative departments. It should be observed that all persons living who have held Ministerial office under former Governments are also technically members of the Executive Council, and are thus liable to be specially summoned for attendance at meetings of that body. The meetings are official in character; they are presided over by the Governor-General (or Governor) and are attended by the clerk, who keeps a formal record of the proceedings. At these meetings the decisions of the Cabinet are put into official form and made effective, appointments are confirmed, resignations accepted, proceedings ordered, and notices and regulations published.

(iii) *The Appointment of Ministers and of Executive Councillors.* Although it is technically possible for the Governor to make and unmake cabinets at his pleasure, under all ordinary circumstances his apparent liberty in choosing his Executive Council is virtually restricted by the operation of constitutional machinery. When a Ministry is defeated in Parliament or at the polls, the procedure both in the Commonwealth and the State Parliaments generally, though not invariably, follows that prevailing in the Imperial Parliament. The customary procedure in connexion with the resignation or acceptance of office by a Ministry is described fully in previous issues of the Year Book. (See No. 6, page 942.)

(iv) *Ministers in Upper or Lower Houses.* The subjoined table shows the number of Ministers with seats in the Upper or Lower Houses of each Parliament in June, 1926 :—

AUSTRALIAN PARLIAMENTS—MINISTERS IN UPPER OR LOWER HOUSES, 1926.

Ministers with Seats in—	C'wealth.	N.S.W.	Vict.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
The Upper House ..	3	2	4	..	2	2	1	14
The Lower House ..	10	11	8	10	4	7	5	55
Total	13	13	12	10	6	9	6	69

(v) *The Cabinet.* (*a*) *General.* The meetings of this body are private and deliberative. The actual Ministers of the day are alone present, no records of the meetings transpire, and no official notice is taken of the proceedings. The members of the Cabinet, being the leaders of the party in power in Parliament, control the bent of legislation, and must retain the confidence of the people and also of the Governor-General (or Governor), to whom they act as an advising body. They also in effect wield, by virtue of their seats on the Executive Council, the whole executive force of the community. In summoning, proroguing, or dissolving Parliament, the Governor-General (or Governor) is usually guided by the advice tendered him by the Cabinet, though legally in no way bound to accept such advice.

(b) *Commonwealth Ministers of State.* A statement showing the names of Ministers of State who have held office since the inauguration of the Commonwealth Government will be found in Official Year Book No. 18, pages 82 and 83, but considerations of space preclude its inclusion in the present issue.

(c) *State Ministries.* A list of the members of the Ministry in each State in June, 1926, will be found in Chapter 1.

5. **Number and Salary of Members of the Legislatures.**—The following table shows the number and annual salary of members in each of the legislative chambers in June, 1926 :—

MEMBERS OF COMMONWEALTH AND STATE PARLIAMENTS, AND ANNUAL SALARIES, 1926.

Members in—	C'wealth.	N.S.W.	Vict.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
MEMBERS.								
Upper House ...	36	99	34	(a)	20	30	18	237
Lower House ..	76	90	65	72	46	50	30	429
Total	112	189	99	72	66	80	48	666
ANNUAL SALARY.								
	£	£	£	£	£	£	£	
Upper House ..	1,000	..	200	(a)	400	400	300	..
Lower House ..	1,000	875	500	500	400	400	300	..

(a) Council abolished in 1922.

The use of the expressions "Upper House" and "Lower House" in the above statement, though not justified constitutionally, is convenient, inasmuch as the legislative chambers are known by different names in the Commonwealth and in some of the States.

6. **Enactments of the Parliament.**—In the Commonwealth, all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution Act (see Chapter I.). In the States, laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly or House of Assembly. The Governor-General or the State Governor acts as Viceroy as regards giving the Royal assent to or vetoing Bills passed by the Legislatures, or reserving them for the special consideration of the Sovereign. In the States, the Councils and Assemblies are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States, in all cases whatsoever. Subject to certain limitations, they may alter, repeal, or vary their Constitution. Where a law of a State is inconsistent with a law of the Commonwealth the latter prevails, and the former is, to the extent of the inconsistency, invalid.

§ 2. Parliaments and Elections.

1. **Qualifications for Membership and for Franchise.**—The conspectus in § 4 of "General Government" in Year Book No. 13 contains particulars, as in 1920, relating to the legislative chambers in the Commonwealth and State Parliaments, and shows concisely the qualifications necessary for membership and for the franchise in each House. (These are, in the main, applicable in 1926, but it must be remembered that Queensland abolished

the Upper House in 1922.) Disqualification of persons otherwise eligible, either as members or voters, is generally on the usual grounds of being of unsound mind or attainted of treason, being convicted of certain offences, and, as regards membership, on the grounds of holding a place of profit under the Crown, being pecuniarily interested in a Government contract, or being an undischarged bankrupt.

2. **The Federal Government.**—The Senate consists of 36 members, six being returned by each of the original federating States. Members of this Chamber are elected for a term of six years, but by a provision in the Constitution half the members retire at the end of every third year, although they are eligible for re-election. In accordance with the Constitution, the total number of members of the House of Representatives must be as nearly as possible double that of the Senate. In the House of Representatives the States are represented on a population basis, and the numbers stand at present as follows :—New South Wales, 28 ; Victoria, 20 ; Queensland, 10 ; South Australia, 7 ; Western Australia, 5 ; Tasmania, 5 ; Northern Territory, 1—total, 76. The Constitution provides for a minimum of five members for each original State. Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. In elections for Senators, each State is counted as a single electorate, but an elaborate scheme of subdivision had to be undertaken in order to provide workable electorates in each State for members of the House of Representatives. Members of both Houses are paid at the rate of £1,000 per annum. Further information regarding the Senate and the House of Representatives is given in Chapter I.

3. **Federal Elections.**—There have been nine complete Parliaments since the inauguration of Federation. The fifth Parliament, which was opened on the 9th July, 1913, was dissolved on the 30th July, 1914, in somewhat unusual circumstances. Under Section 27 of the Constitution, it is provided that, should the Senate fail to pass, or pass with amendments, any proposed law previously passed by the House of Representatives, and should the latter House, after a specified interval, again pass the proposed law, with or without the amendments of the Senate, and the Senate for a second time reject it or pass it with amendments to which the lower House will not agree, then the Governor-General may dissolve the two Houses simultaneously. For the first time in the history of the Commonwealth this deadlock between the Senate and the House of Representatives occurred in the second session of the fifth Parliament, and, in accordance with the section of the Constitution referred to above, both Houses were dissolved by the Governor-General. The first session of the tenth Parliament opened on the 13th January, 1926. Particulars regarding the last five Commonwealth elections may be found in the table given hereunder :—

FEDERAL ELECTIONS, 1914 to 1925.

Date.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.
THE SENATE.									
5th September, 1914 ..	1,478,468	1,333,047	2,811,515	1,139,933	902,403	2,042,336	77.10	67.69	72.64
5th May, 1917 ..	1,444,133	1,391,194	2,835,327	1,184,663	1,018,138	2,202,801	82.03	73.18	77.69
13th December, 1919 ..	1,439,818	1,410,044	2,849,862	1,094,534	938,403	2,032,937	76.02	65.55	71.33
16th December, 1922 ..	1,494,508	1,487,916	2,982,424	966,551	761,695	1,728,246	64.67	51.19	57.95
14th November, 1925 ..	1,656,286	1,645,730	3,302,016	1,515,608	1,499,345	3,014,953	91.51	91.11	91.31
THE HOUSE OF REPRESENTATIVES. (CONTESTED ELECTORATES.)									
5th September, 1914 ..	1,225,990	1,122,451	2,348,441	954,768	772,138	1,726,906	77.88	68.79	73.58
5th May, 1917 ..	1,262,527	1,207,938	2,470,465	1,041,552	892,926	1,934,478	82.50	73.92	78.30
13th December, 1919 ..	1,395,165	1,367,468	2,762,633	1,063,029	914,816	1,977,845	76.19	66.90	71.59
16th December, 1922 ..	1,396,020	1,378,254	2,774,274	920,177	726,686	1,646,863	65.91	52.72	59.36
14th November, 1925 ..	1,635,842	1,632,897	3,268,739	1,499,006	1,488,194	2,987,200	91.63	91.14	91.39

The percentage of electors who exercised the franchise at each election rose from 53.04 for the Senate and 55.69 for the House of Representatives in 1901 to 77.69 and 78.30 respectively in 1917. The next election in 1919 showed a considerable falling off, and in 1922 the decrease was still more marked, the respective percentages for that year being 57.95 and 59.36, or very little more than those for 1901. The Elections of 1925 were the first held since the introduction of Compulsory Voting, the result of which was reflected in the high percentage of voters, viz., 91.31 for the Senate and 91.39 for the House of Representatives.

4. **Federal Referenda.**—According to section 128 of the Act, any proposed law for the alteration of the Constitution must, in addition to being passed by an absolute majority of each House of Parliament, be submitted to a referendum of the electors in each State, and must further be approved by a majority of the States and of the electors who voted. Several referenda have been held from time to time, but in two cases only has any proposed law been assented to by the required majority of the electors. A statement dealing with the various referenda and the voting thereon was given in previous issues of the Official Year Book (See No. 18, pp. 87 to 89), but space will not permit of the incorporation of this information in the present volume.

5. **The Parliament of New South Wales.**—(i) *Constitution.* The Legislative Council in this State is a nominee chamber, the Legislative Assembly being an elective body. Theoretically the Legislative Council may contain an unlimited number of members, and the number of members at the latest available date was ninety-nine. The tenure of the seat is for life ; four-fifths of the members must be persons not holding any paid office under the Crown, but this is held not to include officers of His Majesty's sea or land forces on full or half-pay, or retired officers on pensions. The Legislative Assembly consists of ninety members, who hold their seats during the existence of the Parliament to which they are elected. Nine electorates return five members each, and fifteen return three members each. The duration of Parliament is limited to three years.

(ii) *Particulars of Elections.* Since the introduction of responsible government in New South Wales there have been twenty-seven Parliaments, the first of which opened on the 22nd May, 1856, and was dissolved on the 19th December, 1857, while the twenty-seventh opened on the 24th June, 1925. The last-mentioned Parliament was elected on the 30th May, 1925. The proportional representation system came into operation at the election of 1922. Particulars of voting at elections from 1913 to 1925 are given below :—

LEGISLATIVE ASSEMBLY ELECTIONS, NEW SOUTH WALES, 1913 to 1925.

Year.	Electors Qualified to Vote.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1913	553,633	484,366	1,037,999	385,838	302,389	688,227	72.20	64.55	68.63
1917	574,308	535,522	1,109,830	328,030	295,354	623,384	62.40	60.57	61.52
1920	593,244	561,193	1,154,437	363,115	285,594	648,709	61.21	50.89	56.19
1922	636,662	614,361	1,251,023	466,949	408,515	875,464	73.34	66.49	69.98
1925	678,749	660,331	1,339,080	489,126	435,853	924,979	72.06	66.00	69.07

The franchise was extended to women (Women's Franchise Act) in 1902, and was exercised for the first time at a State election in 1904.

6. The Parliament of Victoria.—(i) *Constitution.* Both of the Victorian legislative chambers are elective bodies, but there is a considerable difference in the number of members of each House, as well as in the qualifications necessary for members and electors. The number of members in the Upper House in June, 1926, was 34, and in the Lower House, 65. In the Legislative Council the tenure of the seat is for six years. but one member for each province retires every third year, except in the case of a dissolution, when one-half of the newly-elected members hold their seats for three years only. Members of the Legislative Assembly are elected for the duration of Parliament, which is limited to three years. An elector for the Legislative Assembly may vote once only, plurality of voting having been abolished in 1899; an elector, however, qualified in more than one district, may select that for which he desires to record his vote. A preferential system of voting (see Year Book No. 6, page 1182) was for the first time adopted in Victoria at the election held in November, 1911.

(ii) *Particulars of Elections.* Since the introduction of responsible government in Victoria there have been twenty-seven complete Parliaments, the first of which opened on the 21st November, 1856, and closed on the 9th August, 1859, while the twenty-seventh was dissolved on the 28th May, 1924. The first session of the twenty-eighth Parliament was opened on the 8th July, 1924, and closed on the 9th January, 1925. The second session was opened on 8th July, 1925, and closed on the 19th January, 1926. Particulars of voting at the last five elections are given in the subjoined table :—

VICTORIAN ELECTIONS, 1913 to 1925.

LEGISLATIVE COUNCIL (LAST ELECTION 1925).

Year.	Electors Enrolled.	Electors Enrolled in Contested Electorates.	Electors who Voted.	Percentage of Electors who Voted in Contested Electorates.
1913	270,175	99,646	47,666	47.89
1916	300,321	92,421	34,853	37.71
1919	317,593	133,058	40,393	30.35
1922	353,440	161,731	47,008	29.07
1925	399,510	172,875	56,033	32.41

LEGISLATIVE ASSEMBLY.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1914	398,234	411,792	810,026	166,502	153,448	319.950	57.55	50.46	53.92
1917	397.585	430,645	828,230	172,317	184,682	356,999	54.30	54.12	54.21
1920	418,085	450,763	868.848	232,604	235,621	468,225	66.23	61.38	63.70
1921	414,818	456,638	871,456	167,812	158,415	326,227	61.29	53.53	57.26
1924	433,357	467,070	900,427	190,153	180,810	370,963	63.02	55.72	59.24

The franchise was extended to women by the Adult Suffrage Act 1908.

7. The Parliament of Queensland.—(i) *Constitution.* As pointed out previously, the Legislative Council in Queensland was abolished in 1922, the date of Royal assent to the Act being the 23rd March. The Legislative Assembly is composed of seventy-two members, and the State is divided into that number of electoral districts. A modified system of optional preferential voting is in operation in Queensland. (See Year Book No. 6, page 1183.)

(ii) *Particulars of Elections.* Since the establishment of responsible government in Queensland there have been twenty-two complete Parliaments, the first of which opened on the 29th May, 1860, and dissolved on the 20th May, 1863, while the twenty-second

Parliament opened on the 15th November, 1920, and closed on the 13th April, 1923. At the elections held in May, 1915, the principle of compulsory voting was introduced for the first time in Australia. Of the total number of electors enrolled at the 1923 elections, 82.23 per cent. went to the polls. Statistics regarding the last five elections for which details are available are given below.

QUEENSLAND LEGISLATIVE ASSEMBLY ELECTIONS, 1912 to 1923.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1912	173,801	135,789	309,590	122,844	95,795	218,639	75.92	75.02	75.52
1915	184,627	150,568	335,195	140,396	125,844	266,240	86.46	90.09	88.14
1918	233,342	191,074	424,416	176,768	163,901	340,669	75.75	85.78	80.27
1920	238,750	206,931	445,681	187,575	168,651	356,226	78.57	81.50	79.93
1923	257,001	219,476	476,477	194,287	174,980	369,267	80.72	83.96	82.23

Particulars of the elections in 1926, if available, will be published in the Appendix.

The election of 1907 was the first State election in Queensland at which women voted, the privilege being conferred under the Elections Acts Amendment Act 1905.

8. **The Parliament of South Australia.**—(i) *Constitution.* In this State there is a Legislative Council composed of twenty members and a House of Assembly with forty-six members, both chambers being elective. The State is divided into five districts, which return four members each to the Legislative Council. For the House of Assembly, eight districts return three members each, and eleven districts two members each.

(ii) *Particulars of Elections.* Since the inauguration of responsible government in South Australia there have been twenty-four complete Parliaments, the first of which was opened on the 22nd April, 1857. The first session of the twenty-fifth Parliament began on the 24th July, 1924. Particulars of voting at the last five elections are given below :—

SOUTH AUSTRALIAN ELECTIONS, 1912 to 1924.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
LEGISLATIVE COUNCIL.									
1912	59,228	19,985	79,213	40,709	13,016	53,725	80.91	72.56	78.71
1915	66,614	21,635	88,249	11,436	4,808	16,244	75.69	71.25	74.32
1918	71,510	23,461	94,971	42,987	11,800	54,787	60.11	50.30	57.69
1921	69,986	23,062	93,048	38,597	11,309	49,906	64.23	53.96	61.57
1924	67,429	22,018	89,447	36,626	10,492	47,118	65.79	54.94	63.02
HOUSE OF ASSEMBLY.									
1912	117,440	106,971	224,411	87,530	73,732	161,262	74.53	68.93	71.86
1915	128,594	124,797	253,391	70,898	65,157	136,055	77.22	72.64	74.95
1918	126,669	132,043	258,712	71,501	62,742	134,243	56.45	47.52	51.89
1921	134,091	137,931	272,022	91,451	77,600	169,051	70.10	57.64	63.77
1924	141,944	147,899	289,843	87,712	73,453	161,165	69.65	56.05	62.71

It is interesting to note that South Australia was the first of the States to grant women's suffrage (under the Constitution Amendment Act 1894), the franchise being exercised for the first time at the Legislative Assembly election on the 25th April, 1896.

9. The Parliament of Western Australia.—(i) *Constitution.* In this State both Chambers are elective. For the Legislative Council there are thirty members, each of the ten Provinces returning three members, while the Legislative Assembly is composed of fifty members, one member being returned by each of the fifty electoral districts. At the expiration of two years from the date of election to a seat in the Legislative Council, and every two years thereafter, the junior member for the time being for each province retires. Seniority is determined (*a*) by date of election, (*b*) if two or more members are elected on the same day, then the junior is the one who polled the least number of votes, (*c*) if the election be uncontested, or in case of an equality of votes, then the seniority is determined by the alphabetical precedence of surnames and, if necessary, Christian names. Members of the Legislative Assembly are elected for three years.

(ii) *Particulars of Elections.* Since the establishment of responsible government in Western Australia there have been eleven complete Parliaments, the first of which was opened on the 30th December, 1890, while the twelfth Parliament was elected on 22nd March, 1924. The preferential system of voting in use in Western Australia is described in Year Book No. 6, page 1184. Particulars relating to the latest five Assembly and Council elections respectively are given in the tables below :—

WESTERN AUSTRALIAN ELECTIONS, 1911 to 1924.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
LEGISLATIVE COUNCIL.									
1916	45,325	13,683	59,008	10,672	2,464	13,136	53.49	50.52	52.91
1918	46,272	14,700	60,972	14,043	3,930	17,973	39.04	31.83	37.20
1920	37,137	14,900	52,037	12,450	3,406	15,856	45.07	28.28	40.27
1922	40,360	14,838	55,198	17,524	4,763	22,287	46.16	33.81	42.82
1924	43,897	14,904	58,801	16,552	4,569	21,121	47.06	39.25	45.12
LEGISLATIVE ASSEMBLY.									
1911	91,814	60,831	152,645	53,355	38,281	91,636	74.44	75.50	74.88
1914	126,598	88,143	214,741	54,612	41,993	96,605	56.59	58.29	57.32
1917	93,106	73,845	166,951	45,453	40,167	85,620	59.46	65.51	62.15
1921	89,523	75,165	164,688	54,747	44,211	98,958	69.16	65.22	67.34
1924	101,717	88,152	189,869	55,591	43,800	99,391	66.00	59.00	62.32

Women's suffrage was granted by the Electoral Act of 1899. At the 1921 elections the first woman member elected to an Australian Parliament was returned.

10. **The Parliament of Tasmania.**—(i) *Constitution.* In Tasmania there are two legislative chambers—the Legislative Council and the House of Assembly, both bodies being elective. The Council consists of eighteen members, returned from fifteen districts, Hobart returning three, Launceston two, and the remaining thirteen districts sending one member each. The are five House of Assembly districts corresponding to the Commonwealth electoral districts, each returning six members, who are elected under a system of proportional representation which first came into force at the 1909 elections. (See Year Book No. 6, page 1185.)

In 1924 and again in 1925 the House of Assembly contested, with at least temporary success, the power of the Legislative Council to amend money bills. The question is likely to be definitely settled by legislation in 1926.

(ii) *Particulars of Elections.* The first Tasmanian Parliament opened on 2nd December, 1856, and closed on 8th May, 1861. There have been twenty-one complete Parliaments since the inauguration of responsible government. Particulars of the voting at the last five elections for the House of Assembly are given hereunder :—

TASMANIAN ELECTIONS, HOUSE OF ASSEMBLY, 1913 to 1925.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1913	53,372	51,920	105,292	38,700	32,102	70,802	72.51	61.83	67.24
1916	54,466	52,855	107,321	41,427	37,557	78,984	76.06	71.05	73.60
1919	53,205	54,336	107,541	37,037	34,027	71,064	69.61	62.62	66.08
1922	54,958	55,591	110,549	38,457	31,295	69,752	69.96	56.30	63.09
1925	56,667	58,234	114,901	41,322	35,959	77,281	72.92	61.81	67.25

The present members of the Legislative Council have been elected at various dates, and the following particulars are given of the last contested election in each case—number of electors on the roll, 40,195 ; number of votes recorded, male 16,860, female 4,703, total 21,563 ; percentage of persons who voted to the number on the roll, 53.66.

The suffrage was granted to women under the Constitution Amendment Act 1903.

§ 3. Cost of Parliamentary Government.

1. **General.**—The following statement shows the cost of parliamentary government in the Commonwealth and in each State, as well as the cost per head of population, for the year ended the 30th June, 1925. In order to avoid incorrect conclusions as to the cost of the Governor-General's or Governor's establishment, it may be pointed out that a very large part of the expenditure (with the exception of the item " Governor's salary ") under the head of Governor-General or Governor represents official services entirely outside the Governor's personal interests, and carried out at the request of the Government.

COST OF PARLIAMENTARY GOVERNMENT, 1924-1925.

Particulars.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
1. *Governor-General or Governor*—	£	£	£	£	£	£	£	£
Governor's Salary ..	10,000	5,000	5,000	3,000	5,000	3,495	2,238	33,733
Official Secretary's salary ..	650	683	(*c*)	306	..	350	..	1,989
Clerks	1,222	353	179	300	..	351	..	2,405
Orderly	..	340	669	..	350	268	..	1,627
Other messengers ..	177	65	..	..	1,082	..	530	1,854
Wages—Housemaids, stewards, gamekeepers, etc. ..	6,460	1,281	1,295	1,341	616	1,012	78	12,083
Country residence—								
Gardener	..	293	323	..	228	112	..	1,542
Other wages	..	586						
Incidental expenses ..	3,543	731	658	1,936	345	388	446	15,085
Furniture, stores, and stationery	459	615	690	1,907	252			
Postal, cables, etc. ..	1,152	95	355		38		202	
Travelling expenses and conveyance of officers ..	1,106	95	..		..	..	72	
Incidental expenses (country residence	..	391	599	..	50	..	..	1,040
Other expenses	2,008	..	2,787	427	74	268	661	6,225
Total	26,777	10,528	12,555	9,217	8,035	6,244	4,227	77,583
2. *Executive Council*—								
Salaries of officers ..	(*a*)	532	780	30	..	100	(*h*)	1,442
Other expenses	(*a*)	254	60	72	..	..	(*h*)	386
Total	(*a*)	786	840	102	..	100	(*h*)	1,828
3. *Ministry*—								
Salaries of Ministers ..	14,409	18,000	10,000	8,829	7,750	6,200	3,000	68,188
Ministerial functions ..	(*b*)	796	(*b*)	..	45	1,712	857	3,410
Special Reports for Cabinet ..	(*b*)	10	(*b*)	..	..	..	..	10
Premiers' Conference ..	100	16	..	..	110	..	9	235
Premier's official visit to England—Travelling expenses	3,015	..	..	..	..	2,600	..	5,615
Total	17,524	18,822	10,000	8,829	7,905	10,512	3,866	77,458
4. *Parliament*—								
A. *Upper House:*								
President and Chairman of Committees	1,600	1,425	1,149	..	800	1,200	850	7,024
Allowance to members ..	35,135	..	6,000	..	6,800	11,090	4,680	63,705
Railway passes	5,569	13,716	(*d*)5,000	..	1,260	4,752	750	31,047
Postage for members ..	800	72	(*e*)	..	15	107	5	999
B. *Lower House:*								
Speaker and Chairman of Committees	1,600	2,088	2,205	1,586	1,312	1,200	900	10,891
Allowance to members ..	74,628	47,311	28,380	29,284	15,938	19,286	8,406	223,233
Railway passes	9,435	17,416	(*f*)	..	2,898	7,920	1,250	38,919
Postage for members ..	2,495	2,693	(*e*)	1,485	260	322	10	7,265
C. *Both Houses:*								
Standing Committee on Pub-Works—								
Remuneration of members	2,000	4,785	1,500	..	2,324	..	63	21,189
Salaries of staff and contingencies	1,950	2,087	1,861	933		3,636	50	
Printing—								
Hansard	7,666	8,010	2,618	3,000	2,668	2,126	..	26,088
Other	20,940	11,175	4,034	2,699	7,331	1,160	3,312	50,651
Parliamentary reporting staff—								
Salaries	11,019	8,561	5,241	3,911	4,252	3,601	..	36,585
Contingencies ..	243	..	1,074	..	167	..	..	1,484
Library—								
Salaries	4,411	2,486	1,160	935	600	50	2,739	93,807
Contingencies	2,859	884	(*g*)1,247	799	598	275		
Salaries of other officers and staff	23,722	22,249	14,810	6,468	4,606	2,999		
Travelling expenses of officers and staff	281	..	..	..	..	..	..	281
Other	6,125	..	..	..	2,201	..	..	8,326
Carried forward ..	212,478	144,958	76,279	51,100	54,030	59,724	23,015	621,584

For Notes see next page.

COST OF PARLIAMENTARY GOVERNMENT—*continued.*

Particulars.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
	£	£	£	£	£	£	£	£
Brought forward ..	212,478	144,958	76,279	51,100	54,030	59,724	23,015	621,584
5. *Miscellaneous*—								
Fuel, light, heat, power, water	1,169	1,117	632	658	1,027	2,986	..	37,773
Posts, telegraphs, telephones	654	844	288	341	364		122	
Furniture, stores, and stationery (Parliamentary officers)	2,447	1,347	519	76	1,293		459	
Contingencies	8,580	1,677	328	3,784	..		1,685	
Cab fares—Late sittings, etc.	..	1,268	296	..	22		..	
Other	..	..	2,078	1,290	422		..	
Total	225,328	151,211	80,420	57,249	57,158	62,710	25,281	659,357
6. *Electoral*—								
Salaries	74,086	2,808	1,378	3,127	3,076	2,433	(*h*)	86,908
Cost of elections, contingencies, etc. (including all payments by railway officers)	43,093	57,175	10,023	7,608	2,516	5,462	3,738	129,615
Total	117,179	59,983	11,401	10,735	5,592	7,895	3,738	216,523
7. *Royal Commissions, Select Committees, etc.*, including fees and other expenses of Commissioners, fees of counsel, costs incurred by Ministers, cost of overtime worked by departments preparing information, bonuses, etc.	17,213	47,001	410	276	2,719	4,877	366	72,862
Total	17,213	47,001	410	276	2,719	4,877	366	72,862
GRAND TOTAL ..	404,021	288,331	115,626	86,408	81,409	92,338	37,478	1,105,611
Cost per head of population ..	1s. 4d.	2s. 7d.	1s. 7d.	2s. 1d.	3s. 0d.	5s. 1d.	3s. 5d.	3s. 9d.

(*a*) Included under Governor-General. (*b*) Not available. (*c*) Included under Executive Council. (*d*) Both Houses. (*e*) Included under Library. (*f*) Included under Upper House. (*g*) Including members' postage. (*h*) Duties performed by Chief Secretary's Department.

Figures showing total cost and cost per head during each of the last five years are given in the next table.

COST OF PARLIAMENTARY GOVERNMENT, 1920–21 TO 1924–25.

Year.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
				TOTAL.				
	£	£	£	£	£	£	£	£
1920–21 ..	386,636	241,932	115,066	115,421	68,935	84,126	36,433	1,048,549
1921–22 ..	406,041	332,975	113,149	99,008	67,743	80,808	36,694	1,136,418
1922–23 ..	479,658	212,056	109,137	109,020	72,417	75,360	37,084	1,094,732
1923–24 ..	367,479	204,817	128,143	89,101	83,031	82,410	35,629	990,610
1924–25 ..	404,021	288,331	115,626	86,408	81,409	92,338	37,478	1,105,611
				PER HEAD OF POPULATION.				
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1920–21 ..	1 5	2 4	1 6	3 0	2 9	5 0	3 5	3 10
1921–22 ..	1 6	3 1	1 5	2 7	2 8	4 10	3 4	4 0
1922–23 ..	1 8	1 11	1 5	2 9	2 10	4 5	3 4	3 11
1923–24 ..	1 3	1 10	1 7	2 2	3 2	4 8	3 3	3 5
1924–25 ..	1 4	2 7	1 7	2 1	3 0	5 1	3 5	3 9

§ 4. Commonwealth Government Departments.

Owing to exigencies of space the statement showing the various matters dealt with and the Acts administered by the Minister of each of the Commonwealth Departments, which was incorporated in Official Year Book No. 17, pp. 97 to 100, cannot be repeated in this issue.

§ 5. Strength of the Civil Service.

The strength of the permanent Civil Service at a definite point of time is not available, as the dates to which annual records are made up vary in different State Departments. The following table excludes temporary (except railways and Government tramways) and part time officers (registrars of births and deaths, postal contractors, etc.); naval, air, and military employees; and certain others, such as those employed in State trading undertakings :—

CIVIL SERVICE—NUMBER OF PERMANENT OFFICERS, 1924–25.

—	C'wlth.		N.S.W.		Victoria.		Queensland.		South Australia.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
(*a*) Railways and Tramways	(*b*)1,243		52,760		34,896		21,721		12,835	
Police	..	..	2,886	4	1,806	4	1,127	..	605	11
Teachers	..	..	4,310	5,886	2,660	4,686	1,729	2,312	950	1,728
Other Departments ..	22,766	3,366	6,291	1,510	3,593	965	4,457	1,266	1,713	182
Total	27,375		73,647		48,610		32,612		18,024	

—	W. Australia.		Tasmania.		N. Territory.		Australia.		
	M.	F.	M.	F.	M.	F.	M.	F.	Total.
(*a*) Railways and Tramways ..	8,189		1,466		(*c*)		(*d*)	(*d*)	133,110
Police	518	5	239	2	32	..	7,213	26	7,239
Teachers	666	1,283	314	888	4	8	10,633	16,791	27,424
Other Departments	1,305	175	530	139	(*c*)	(*c*)	40,655	7,603	48,258
Total	12,141		3,578		44		(*d*)	(*d*)	216,031

(*a*) Salaried and wages staff; includes temporary employees—Municipal Tramways excluded. (*b*) Trans-Australian and Northern Territory only. Oodnadatta line is worked by S.A. Railways, and Federal Capital Territory lines by N.S.W. Railways, and the officers are included in the returns for those States. (*c*) Included with Commonwealth. (*d*) Not available.

§ 6. Legislation during 1925.

1. **General.**—The following summary which refers to the more important legislative enactments of the Commonwealth and State Parliaments during the year 1925 is exclusive of the ordinary Appropriation and Loan Acts. The principal Ordinances promulgated during the same year in the Northern Territory and Federal Capital Territory have, for the sake of convenience, been included after the heading 2, Commonwealth, immediately following.

2. **Commonwealth.**—(i) *Export Guarantee.* Assistance is extended to growers of primary produce used in preparation of goods for export.

(ii) *States Loan.* Agreements may be made with the States for the Commonwealth to raise money to be loaned to the States, and to convert State loans.

(iii) *Immigration.* Provision is made for prohibiting the entrance of aliens of specified nationality and the deportation of certain persons guilty of creating industrial disturbance or of offences prejudicial to public welfare.

(iv) *Navigation.* Power is given to suspend certain provisions of the Navigation Act relating to coasting trade.

(v) *Nationality.* Definitions of British Consulate and of natural-born British subjects are amended.

(vi) *Peace Officers.* Power is given to appoint Peace Officers.

(vii) *Commonwealth Bank (Rural Credits).* Provision is made for the establishment of a Rural Credits Department of the Commonwealth Bank.

(viii) *Main Roads Development.* An additional sum of £750,000 is provided for development or reconditioning of main roads.

(ix) *Australian War Memorial.* Provision is made for an Australian War Memorial. A Board of Management is to be appointed and a fund established.

(x) *Commonwealth Electoral.* Provisions regarding persons entitled to enrolment and qualifications of members of House of Representatives are amended.

(xi) *Customs.* Conditions as to the application of the Preferential Tariff are defined.

(xii) *Entertainments Tax.* Rates of tax are altered.

(xiii) *Invalid and Old-age Pensions.* The maximum pension is raised to £52 per annum.

(xiv) *Income Tax Assessment.* Taxable income is further defined especially as regards the income of companies.

(xv) *Income Tax.* Rates for 1925–26 are declared.

(xvi) *Excise Tariff Validation.* Validates Excise duties introduced into Parliament on 2nd September, 1925.

(xvii) *Customs Tariff Validation.* Validates Tariff proposals introduced into Parliament during September, 1925.

3. **Northern Territory.**—(i) *Meat Industry Encouragement.* Provides for the establishment of a Meat Industry Encouragement Fund to which levies shall be paid by owners of stock. The Administrator may make recommendations regarding increase of production and establishment of meatworks, etc.

(ii) *Lotteries.* Lotteries for charitable purposes are allowed. Balance-sheets must be produced. The printing and sale of other lottery tickets are prohibited.

(iii) *Crown Lands.* Prescribes the rental of leases exchanged for an existing lease.

4. **Federal Capital Territory.**—(i) *Real Property.* Provides for the declaration of title to land and facilitates transfer.

(ii) *Industrial Board.* Provision is made for an Industrial Board.

(iii) *Leases (Special Purposes).* Leases may be granted for purposes other than business or residence.

(iv) *Dairies Supervision.* Provision is made for the supervision of dairies.

5. **New South Wales.**—(i) *Marriage Amendment.* The impugning of marriages celebrated in accordance with the Marriage Act 1899 is declared unlawful. Marriage with deceased husband's brother is declared valid.

(ii) *Coal Mines Regulation.* No person without experience is to be employed at the face.

(iii) *Mines Rescue.* Rescue stations and permanent corps and brigades are to be established, and apparatus provided and men trained in the use thereof. Mine owners are to contribute to Mines Rescue Funds.

(iv) *Prickly Pear (Amendment).* A commissioner is to be appointed in lieu of the Prickly Pear Destruction Board.

(v) *Parliamentary Allowances and Salaries.* Allowance to members of Legislative Assembly is increased from £600 to £875 per annum, and appropriation for Ministers from £20,300 to £21,245 per annunm.

(vi) *Trustees.* The law relating to trustees and trust property is amended and consolidated. The Wills, Probate and Administration Act 1898 is also amended.

(vii) *Forty-four Hours Week.* The ordinary working hours of employees in industries other than coal mining and shipping shall not exceed forty-four per week nor more than six out of seven consecutive days. Consequential reductions in wages are not allowed.

(viii) *Returned Soldiers (Amendment)* Provision is made for the relief of certain soldier settlers, for the revision of indebtedness to the Crown of discharged soldiers, and for extension of the law relating to waiver and remission of rents and interest on soldiers' holdings and the appraisement of soldiers' holdings.

(ix) *Widows' Pension.* Subject to certain conditions, a pension not exceeding 20s. per week may be paid to a widow with a dependent child, and 10s. per week in respect of each child under fourteen years of age wholly dependent upon her.

(x) *Income Tax (Management) Amendment.* Provides for method of dealing with profits accruing from the sale of a business as a going concern; varies allowable deductions; provides for dealing with income of foreign taxpayers.

(xi) *Government Railways (Amendment).* Validates action of Railway Commissioners in restoring to previous status officers dismissed in consequence of 1917 strike, and empowers Commissioners to disrate others.

6. **Victoria.**—(i) *Judgments (Reciprocity).* Facilitates the enforcement in Victoria of judgments and awards of Superior Courts in His Majesty's dominions outside the United Kingdom and Australia.

(ii) *Maintenance Orders.* Provides for the enforcement in Victoria of maintenance orders made outside the State.

(iii) *Poisons.* Hawking and distribution of poisons as samples are prohibited. The obtaining of narcotic drugs by false pretences, and the possession without legal authority of certain drugs are made offences.

(iv) *Victorian Wheatgrowers Corporation Ltd. (Guarantee).* The State may guarantee to make good, within limits, any default by Corporation in repayment of advances made by banks.

(v) *Superannuation.* Provision is made for Superannuation on a contributary basis for public officers and dependents.

(vi) *Dried Fruits.* Determines the proportion of the output of dried fruits to be marketed outside the Commonwealth, and provides for the establishment of a Dried Fruits Board.

(vii) *Closer Settlement.* The Act of 1915 is amended especially with regard to Crown Grants. Power is given to defer payment of part of purchase money and interest and to write off debts owing by discharged soldier settlers.

(viii) *Motor Omnibus.* Motor Omnibuses must be licensed as hackney carriages. Developmental routes may be prescribed.

7. **Queensland.**—(i) *Industrial Arbitration.* The Court of Industrial Arbitration is abolished, and a Board of Trade and Arbitration with administrative and judicial functions is established.

(ii) *Wheat Pool Amendment.* The Council of Agriculture is empowered to levy amount required for expenses. The functions of the State Wheat Board may be transferred to a Board constituted under the Pools Act.

(iii) *Workers' Compensation Amendment.* Amends the table of industrial diseases.

(iv) *Lands Act Amendment.* Provides for destruction of noxious plants and the erection of "ring fences."

(v) *Land Tax.* Operation of super tax is extended to year 1925–26.

(vi) *Medical.* Provision is made for a Medical Board, the registration, etc., of medical practitioners, and the conduct of inquests, burials, etc.

(vii) *Coal Mining.* The Acts relating to Coal Mining are amended and consolidated.

(viii) *Primary Producers' Pool Amendment.* Growers may petition Governor in Council to declare that a commodity shall be divested from growers and vested in the Board.

(ix) *Fruit Marketing Organization Amendment.* General powers are given to a Committee of Direction in regard to purchase of land, employment of officers, agents, financial accommodation, fruit marketing and trading.

(x) *Main Road Amendment.* The Main Roads Board is abolished. Provision is made for a Commissioner of Main Roads.

(xi) *Heavy Vehicles.* Provision is made for the establishment of traffic routes, the registration of vehicles, the insurance of motor omnibuses, and the establishment of a Heavy Vehicles Fund from which payments are to be made to local authorities for upkeep of roads.

(xii) *Basic Wage.* Notwithstanding any declaration or award made to the contrary before this Act comes into force, the basic wage made by the Arbitration Court in 1921, with its terms, provisions and discretions, still operates. The minimum rate of wages to employees governed or bound by awards or industrial agreements shall be as fixed by the basic wage declaration or declared by the Court pursuant to such declaration.

8. South Australia.—(i) *Taxation (Motor Spirit Vendors).* Vendors of Motor Spirit must register and file quarterly returns. A tax of 3d. per gallon sold is levied.

(ii) *Voluntary Wheat Pool Agreement Ratification.* Repayment of moneys advanced by the Commonwealth Bank to the Pool is guaranteed by the State.

(iii) *Adoption of Children.* Conditions relating to the adoption of children are defined.

(iv) *Dried Fruits Amendment.* Provides for registration of growers of fruits for drying and the furnishing of returns.

(v) *State Bank.* Provision is made for the establishment of a State Bank to carry on general banking business and to make advances to primary producers and others engaged in the processing and marketing of primary produce.

(vi) *Taxation (Motor Spirit Vendors) Amendment.* Under certain conditions the principal act may be suspended.

(vii) *Taxation.* New rates of income tax are enacted and amendments made in deductions allowed for bad debts, repairs, etc.

(viii) *Industrial Code Amendment.* The principal Act is extended to clubs and club employees. Rules and jurisdiction of Board of Industry are amended.

(ix) *Discharged Soldiers Settlement (Relief).* Provision is made for remission of interest, for the surrender of fee simple of land in exchange for agreement, and for relief to settlers in irrigation areas.

(x) *Compulsory Acquisition of Land.* More satisfactory provision is made for compulsory acquisition of land for public works, etc., and for payment of compensation therefor.

9. Western Australia.—(i) *Group Settlers' Advances.* Provides that where advances have been made for purchase of stock, etc., the stock or crops shall be mortgaged to the Minister of Lands.

(ii) *Entertainments Tax Assessment.* Provides for the imposition of a tax on payment for admission to entertainments.

(iii) *Water Boards Act Amendment.* Owners of lands adjacent to pipes must provide storage tanks, and power is given to levy rates.

(iv) *Bush Fires Act Amendment.* Fire-protected areas may be declared in which it is unlawful to set fire to bush without authority of Minister.

(v) *Group Settlement.* Provides for grants and conditional purchase leases being made to settlers in group settlements and for payment of expenditure thereon.

(vi) *Main Roads Amendment.* Provides for the construction, maintenance, and supervision of main and developmental roads.

(vii) *Industrial Arbitration Amendment.* Provides for Industrial Boards, conditions for apprentices, and contains amendments relating to the declaration of the basic wage.

10. Tasmania.—(i) *Public Servants' Retiring and Death Allowance.* Provision is made for payment of allowances on retirement or death of public servants.

(ii) *Shops.* The Shops Act 1915 is consolidated and amended.

(iii) *Traffic.* Previous legislation is consolidated, and amendments relating particularly to motor traffic are included.

(iv) *Fish Canning Encouragement.* Provides for the encouragement of fish-canning in Tasmania.

(v) *Lamb Raising Industry Encouragement.* A Board is established with power to advise the trustees of the Agricultural Bank to purchase sheep and sell sheep to farmers, and to make advances to farmers and graziers to enable them to purchase sheep.

(vi) *Migration Agreement.* The Government is empowered to enter into an agreement with the Commonwealth in respect of migration and of borrowing in connexion with settlement.

(vii) *Wood-pulp and Paper Industry Encouragement.* The manufacture of wood-pulp and paper in Tasmania is encouraged, and the rights and concessions in connexion therewith are prescribed.

(viii) *Rubber Industry Encouragement.* The manufacture of tyres and other rubber goods in Tasmania is encouraged.

§ 7. Consular Representatives of Foreign Countries in Australia.

The following tabular statement shows the number of consular representatives of foreign countries in each State for the year 1926 :—

CONSULAR REPRESENTATIVES IN AUSTRALIA, 1926.

Country.	Number of Consular Representatives in—						
	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total Aust.
Argentine Republic	2	2	1	1	..	1	7
Austria	..	1	..	..	..	..	1
Belgium	4	1	1	1	1	1	9
Brazil	1	1	..	1	..	1	4
Chile	1	1	1	1	1	..	5
China	..	1	..	..	..	..	1
Colombia	2	1	..	..	..	..	3
Costa Rica	1	..	..	..	..	..	1
Czecho-Slovakia	1	1	1	..	1	..	4
Denmark	4	2	3	2	1	1	13
Ecuador	2	..	..	..	..	..	2
Estonia	1	..	..	..	..	..	1
Finland	1	1	1	1	..	..	4
France	3	1	1	1	1	1	8
Germany	..	2	..	..	..	..	2
Greece	2	1	1	..	1	..	5
Guatemala	..	1	..	..	..	..	1
Honduras	..	1	..	..	..	..	1
Italy	1	2	1	1	1	1	7
Japan	2	2	1	1	1	..	7
Liberia	1	..	..	1	..	..	2
Mexico	..	1	..	1	..	..	2
Netherlands	3	1	3	1	1	1	10
Nicaragua	..	1	..	..	..	..	1
Norway	3	3	2	3	3	2	16
Panama	2	1	1	..	..	..	4
Paraguay	1	1	..	1	1	..	4
Peru	2	1	..	1	..	..	4
Poland	1	..	..	..	..	..	1
Portugal	1	1	..	..	..	..	2
Salvador	..	1	..	..	..	..	1
Serb-Croat-Slovene State	1	..	..	..	..	..	1
Siam	1	..	..	..	..	..	1
Spain	2	2	1	1	1	..	7
Sweden	3	1	2	3	2	1	12
Switzerland	1	1	1	..	..	..	3
U.S.A.	4	3	1	1	1	..	10
Uruguay	1	..	..	..	..	..	1
Venezuela	1	..	..	..	..	..	1
Total	56	40	23	23	17	10	169*

* In addition, Northern Territory has a Consul for the Netherlands.

Countries having Consuls-General in Sydney are Belgium, Chile, Czecho-Slovakia, Denmark, Ecuador, France, Greece, Japan, Netherlands, Paraguay, Peru, Poland, and Sweden. Those having Consuls-General in Melbourne are Argentine, China, Colombia, Germany, Honduras, Norway, and Switzerland. The Consul-in-Chief for Panama is located at Newcastle, New South Wales.

CHAPTER IV.

LOCAL GOVERNMENT.

§ 1. Introduction.

1. **General.**—The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in New South Wales and South Australia, more especially in the large unincorporated areas, these duties are undertaken directly by the Government. In some States, moreover, a certain proportion of the roads and bridges are constructed and maintained by the Government, which, in addition, advances money for main roads to be expended by municipalities under the supervision of special Boards. Although roads, bridges and ferries constructed and maintained directly by Government do not properly come under the heading of " Local Government," they have been included in this chapter for the sake of convenience.

2. **Municipalities, Shires, etc.**—A description of the various systems of municipal government in the different States, and their development from the earliest date, was published in 1919 by the Commonwealth Bureau of Census and Statistics in a separate work entitled " Local Government in Australia." Limits of space preclude the incorporation of the information contained therein in the Official Year Book.

3. **Water Supply and Sewerage.**—In the cities of Sydney, Melbourne and Brisbane the control of water supply and sewerage is in the hands of special Boards, while in Adelaide and Perth, these services are under the direct supervision of Government Departments. In most of the other cities and towns, the municipal councils, or, in some cases, water trusts, are the controlling bodies which either construct the works out of their own resources or take them over after they have been constructed by the Government.

4. **Harbours.**—The majority of the harbours in Australia are managed by Boards, the members of which are either elected by persons interested or appointed by the Government. In a few instances, however, they are directly controlled by the Government. Only those which are controlled by Boards are dealt with in the following pages.

5. **Fire Brigades.**—In all the States, the management of fire brigades is undertaken by Boards. The members of these Boards are usually elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, together with one or more appointed by the Government. Occasionally volunteer or country fire brigades are represented.

§ 2. Government Roads, Bridges, Etc.

1. **New South Wales.**—(i) *General.* The control of all roads, bridges and ferries, with the exception of those proclaimed as " National " and of those in the unincorporated areas of the Western Division, which still remain under its jurisdiction, was transferred, in 1920, from the Public Works Department to local authorities. The Government has also adopted the policy of assisting municipal and shire councils to recondition certain main roads by doing the work in the first instance, and recovering in instalments from the councils concerned one-half of the cost.

(ii) *Roads, Bridges and Ferries.* At the end of 1923, the "National" works consisted of 58 miles of roads, 283 bridges with a total length of 108,631 feet, and 23 ferries, while in the unincorporated areas of the Western Division there were 6,053 miles of roads (of which 213 miles were metalled or ballasted, 163 formed only, and 3,437 cleared only, 99 bridges of a total length of 13,602 feet, 340 culverts, and 6 ferries under the control of the Public Works Department.

(iii) *Expenditure on Roads, Bridges and Ferries.* The total Government expenditure on roads, bridges and ferries from 1857 to 1924–25 was £26,520,315. The following table shows the expenditure for each year from 1919–20 to 1924–25 :—

ROADS, ETC.—EXPENDITURE BY GOVERNMENT DEPARTMENTS, NEW SOUTH WALES, 1920 TO 1925.

Year.	1919–20.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£	£
Expenditure.. ..	116,034	163,121	542,205	443,541	458,415	(*a*)635,976

(*a*) Includes £260,547, Sydney Harbour Bridge.

2. **Victoria.**—(i) *General.* A small sum is expended annually by the State Government on roads and bridges, and a considerable amount of loan money is advanced in each year to the Country Roads Board for the purpose of constructing and maintaining main and developmental roads, the amount so expended during the year ending 30th June, 1924, being £566,596. An annual payment of £50,000 is also made out of Consolidated Revenue to the Board for maintenance works.

(ii) *Direct Expenditure by Government.* The following table shows the amounts of money expended directly by the Government on roads and bridges during the years 1919–20 to 1924–25 :—

ROADS AND BRIDGES—GOVERNMENT EXPENDITURE, VICTORIA, 1919-20 TO 1924-25.

Year.	1919–20.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£	£
Expenditure.. ..	7,832	10,842	23,622	65,459	46,761	68,939

(iii) *Country Roads Board.* The duties of this Board were given in some detail in Year Book No. 15, p. 526.

The borrowing of a sum of £4,000,000 has been authorized for the purposes of making permanent works under the Country Roads Acts. One half of the amount expended on permanent works and maintenance must be refunded by the municipalities affected, 6 per cent. of the amount due in respect of permanent works being payable annually, and the cost of maintenance allocated to each municipality must be paid before the 1st of July in each year. A special rate, not exceeding 6d. in the pound, may be levied in any ward or riding of a municipality for the purpose of such repayment.

All registration fees, licence fees and fines under the Motor Car Act, all licence fees for unused roads and water frontages, and all registration fees and fines for traction-engines are credited to the Country Roads Board Fund. The total loan expenditure for permanent works to the 30th June, 1924, was £2,933,770. The following table gives the revenue and expenditure on permanent and maintenance works for the five years 1919–20 to 1923–24 :—

COUNTRY ROADS BOARD, VICTORIA—REVENUE AND EXPENDITURE, 1919-20 TO 1923-24.

Year ended 30th June.	Revenue.					Expenditure.	
	Motor Registration and Licence Fees.	Unused Roads etc., Licence Fees.	Contributions by Municipalities.		Total.	Permanent Works.	Maintenance.
			Permanent Works.	Maintenance.			
	£	£	£	£	£	£	£
1920	85,303	22,072	37,573	89,730	294,498	335,755	192,320
1921	98,135	21,441	50,036	90,335	342,865	271,869	221,395
1922	118,672	21,487	61,024	104,026	429,308	288,937	267,969
1923	158,249	19,933	68,608	123,819	514,469	266,046	288,129
1924	222,251	20,110	76,355	134,349	585,742	201,615	343,233

(iv) *Developmental Roads.* For the purpose of constructing and maintaining subsidiary or developmental roads, the Government may borrow the sum of £5,000,000. The work is carried out under the supervision of the Country Roads Board, and the State provides the whole of the money and makes provision out of State funds for liquidating the liability; the municipalities, however, are required to bear a proportion of the interest on the outlay during the period of the loan and to maintain the roads when constructed. The amount expended during the year ended 30th June, 1924 was £467,329, and the total expenditure to that date was £2,516,649.

3. **Queensland.**—Under "The Main Roads Act of 1920," a Main Roads Board was constituted, consisting of three members appointed by the Governor in Council. Subsequently, by "The Main Roads Acts Amendment Act of 1925," the Board was abolished, and its powers conferred upon a single commissioner. The duties of the Commissioner are to make the necessary surveys and investigations in order to determine what roads should be main roads, and, under certain circumstances, to undertake the construction and maintenance of such roads. Before any road can be proclaimed a main road, the shire councils through whose areas such road passes have the right to lodge objections thereto, and the Commissioner must consider such objections and may vary his decision. The whole of the money necessary for the construction and maintenance of main roads is provided from the Main Roads Fund at the Treasury, and the councils concerned must repay one-half the cost thereof over a period of 30 years, with interest. This fund is formed from (*a*) moneys appropriated by Parliament therefor, (*b*) fees on motor vehicles and traction engines, (*c*) fees and rents for unused roads, (*d*) moneys received from the sale of timber, sand, etc., on any main road, and (*e*) all other moneys received or recovered by the Commissioner. Wherever possible, the Commissioner arranges with local authorities to undertake the survey and construction of works, but in most cases, owing to the dearth of trained engineers in the employ of councils, the Commissioner has had to undertake most of the survey work and preparation of plans and a considerable portion of the construction. During the year ended 30th June, 1925, the receipts of the Commission amounted to £457,675, including £200,000 from the Treasury Loan Fund, £141,274 from motor fees, and £105,409 from the Commonwealth for schemes under the Main Roads Development Act (Commonwealth); and the disbursements to £506,784, including £180,331 expenditure on permanent works, £170,652 on schemes under the Commonwealth Main Roads Development Act, and £44,720 on maintenance of main roads. At that date, 3,325 miles of roads had been gazetted as main roads, and 356 miles had been surveyed during the year. In addition, 52 miles of roads had been gazetted as developmental roads up to 30th June, 1925, and 5 miles surveyed during the year.

The money made available to the State under the Commonwealth "Main Roads Development Act" is allocated and expended under the direction of the Commissioner of Main Roads.

The developmental roads sections of "The Main Roads Acts 1920 to 1925" provide that on such roads the Commissioner will be responsible for the total cost of construction, but that the local authorities concerned shall repay half the interest over a period of twenty years, and that the local authorities shall be responsible for maintenance.

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4. **South Australia.**—Under the Main Roads Act of 1922, the Government is authorized to borrow up to £300,000 for the purpose of reconstructing main roads, and for acquiring quarries and working the same. In the sparsely-settled districts outside the incorporated areas, the roads and bridges are constructed and maintained by the Public Works Department, which expended thereon during the year ended 30th June, 1925, the sum of £17,720. During the same year, the Government expended £132,268 from loan funds on roads. In addition, a large amount of money is allocated annually to the municipal corporations and district councils solely for the construction and maintenance of main roads within their boundaries.

The Roads Improvement Act 1921 provides for the constitution of a Roads Advisory Board, consisting of three members of the Public Service appointed by the Governor. Main roads may be proclaimed. The duties of the Board are to advise the Minister as to the moneys which should be expended by each council on the construction, maintenance and keeping in repair of the main roads within its district, and the amount of money voted for main roads which should be allocated to each council. The Minister determines (*a*) the total amount of money to be expended by each council for such purposes during each financial year, (*b*) the amount to be allocated to each council, and (*c*) the amount to be spent by each council out of revenue, for which a council may declare a special rate not exceeding fourpence in the pound, but the amount under (*c*) must not exceed one-half the amount under (*b*). Should a council make default in carrying out the work prescribed. the Engineer for Roads and Bridges may undertake it, and half the amount of the cost thereof becomes a debt due by such council to the Minister. To provide additional funds for main roads upkeep a Motor Spirit Vendors Tax at the rate of 3d. per gallon on sales has been adopted, and a further measure has been passed to provide that all horse-drawn vehicles in the metropolitan area, which carry goods or produce, shall pay annual licence fees, the proceeds of which are also to be devoted to the upkeep of main roads.

5. **Western Australia.**—In Western Australia the construction, maintenance, and management of roads and bridges throughout the State are under the control of municipalities and district road boards which are subsidized by the Government.

6. **Tasmania.**—(i) *Construction.* In Tasmania the cost of construction of roads and bridges is borne almost entirely by the central Government.

Up to the 30th June, 1925, the loan expenditure on these works was £4,033,673. In addition, half the proceeds of the sale of land has formed a Crown Lands Fund for the construction of roads to new holdings. Under this provision £670,565 has been expended. This fund has in recent years more than met the demands on it, and expenditure therefrom since 1918 has been limited to £10,000 annually, the balance being used for redemption of debt. The following table gives particulars of the amount and cost of construction for the last five years :—

ROADS AND BRIDGES, TASMANIA—GOVERNMENT EXPENDITURE ON CONSTRUCTION TO 30th JUNE, 1925.

Period.	Expenditure.		New-road Mileage.		New Bridges.
	Loans.	Crown Lands Fund.	Cleared.	Metalled.	
	£	£	Miles.	Miles.	No.
1920–21	100,621	4,744	62	80	8
1921–22	99,760	8,198	69	73	27
1922–23	71,017	6,412	47	57	13
1923–24	56,752	5,537	53	48	15
1924–25	129,838	5,341	139	119	16

In addition, in 1924–25, the sum of £12,486 provided by the Commonwealth Government was expended on roads; the conditional expenditure by the State Government is included in the above figures.

(ii) *Maintenance.* The maintenance of roads and bridges is undertaken by the municipalities with some assistance from the central Government, chiefly by way of subsidy. Under the Aid to Road Rates Act, a sum of £11,000 is distributed annually among the municipalities, in proportion as the cost of maintenance falls on their resources. Under the Main Roads Maintenance Act 1918 a further sum of £5,000 was provided out of Consolidated Revenue, which, with the addition of the motor tax, less 5 per cent., and a contribution from municipalities, is expended on the upkeep of main roads. In 1924–25 the amount available for 1,100 miles of main road was £45,800. The work is carried out in most cases by municipalities, under the general direction of an Advisory Board, on which the Government, the municipalities, and the motorists are all represented. Further, the Repairs to Roads Act 1920 provides for loans for 15 years to municipalities for the purpose of re-making roads—half the loan is repaid in instalments by the local body and the remainder by the State Government. The Government also provides for the repair of the more important bridges, and for emergency work.

The above provision for maintenance has, however, in recent years been found insufficient to cope with the heavier motor traffic and to meet the demand for a better road surface further legislation is in contemplation.

7. **Summary of Loan Expenditure on Roads and Bridges**—Figures showing the total expenditure on roads and bridges in the States are not available. The subjoined statement, however, gives the amounts of loan expenditure by the State Governments up to the 30th June, 1925 :—

ROADS AND BRIDGES.—GOVERNMENT LOAN EXPENDITURE TO THE 30th JUNE, 1925.

Expenditure.	N.S.W.	Victoria. (*a*)	Q'land. (*b*)	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
Total to 30/6/23	2,381,744	4,724,249	931,775	2,110,535	459,468	3,847,083	14,454,854
,, ,, 30/6/24	2,567,322	5,290,845	931,775	2,276,475	525,477	3,903,835	15,495,729
,, ,, 30/6/25	3,324,402	6,656,878	832,839	2,408,743	617,111	4,033,673	17,873,646

(*a*) This expenditure is from loan funds on country roads ; temporary advances not included.
(*b*) In addition, Main Roads Board loan expenditure to 30th June, 1925, was £699,120.

The following table shows the annual expenditure from loans on roads and bridges by the central Governments in each State during the years 1920–21 to 1924–25 :—

ROADS AND BRIDGES.—LOAN EXPENDITURE BY STATES, 1921 TO 1925.

Year ended 30th June.	N.S.W.	Victoria.	Q'land. (*a*)	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
1920–21 ..	13,555	965,646	..	120,223	32,121	100,621	1,232,166
1921–22 ..	320,271	960,821	..	109,120	12,585	99,760	1,502,557
1922–23 ..	231,271	573,972	217,500	62,510	34,311	71,017	1,190,581
1923–24 ..	185,578	960,821	496,000	165,940	66,009	56,752	1,931,100
1924–25 ..	750,907	1,155,362	200,000	132,268	91,634	129,838	2,460,009

(*a*) Main Roads Board loan expenditure.

The two tables given above show only a small proportion of the actual expenditure upon roads and bridges in the different States, for the reason that (*a*) there have been large expenditures from revenue, both by the central Governments and by local authorities, and (*b*) the State Governments have in many cases voted grants and subsidies on the amount of rates collected, and have issued loans to local authorities either for the express purpose of the construction of roads and bridges or for the general purpose of public works construction.

§ 3. Municipalities, Shires, Etc.

1. **New South Wales.**—(i) *General.* Practically the whole of the State, with the exception of the Western Division, has been divided into municipalities and shires, the total area incorporated at the end of 1924 being 183,976 square miles, of which 2,637 square miles are included in the former and 181,339 in the latter. The areas incorporated comprise the whole of the Eastern and Central Divisions of the State, with the exception of Lord Howe Island, the islands in Port Jackson, and the quarantine station at Port Jackson.

(ii) *Municipalities.*—(*a*) *Summary.* The following table gives the number, area and population of municipalities, together with the length of roads and the number of bridges and ferries therein for the years 1920 to 1924 :—

MUNICIPALITIES, NEW SOUTH WALES—SUMMARY, 1920 TO 1924.

Year.	No. of Municipalities.	Sydney and Suburbs.		Country.		Length of Roads.	Bridges.	Ferries.
		Area.	Population.	Area.	Population.			
		Acres.		Acres.				
1920	185	95,259	881,594	1,275,875	525,264	(*a*)	(*a*)	(*a*)
1921	185	95,259	906,320	1,725,875	531,090	10,187	745	26
1922	185	95,259	934,970	1,725,875	536,050	(*a*)	(*a*)	(*a*)
1923	184	95,259	959,772	1,720,275	545,850	(*a*)	(*a*)	(*a*)
1924	181	95,259	989,390	1,593,075	552,930	10,007	673	24

(*a*) Not available—collected triennially.

Of the 10,007 miles of roads, 4,772 were metalled, ballasted or gravelled, 1,787 formed only, and 1,859 cleared only, while 1,589 miles were natural surface.

(*b*) *Unimproved and Improved Values.* The table hereunder gives a comparison of the unimproved and improved values for the years 1920 to 1924 inclusive :—

MUNICIPALITIES, NEW SOUTH WALES.—CAPITAL VALUES, 1920 TO 1924.

Year.	Sydney.	Suburbs.	Total Metropolis.	Country.	Grand Total.
			UNIMPROVED VALUE.		
	£	£	£	£	£
1920	33,077,620	46,847,825	79,925,445	29,060,263	108,985,708
1921	35,887,412	51,027,987	86,915,399	30,706,273	117,621,672
1922	36,838,607	54,642,223	91,480,830	32,343,067	123,823,897
1923	36,918,354	60,984,924	97,903,278	34,238,069	132,141,347
1924	45,593,929	65,559,272	111,153,201	36,068,427	147,221,628
			IMPROVED VALUE.		
1920	84,580,400	127,414,223	211,994,623	77,900,508	289,895,131
1921	99,647,060	141,632,450	241,279,510	88,922,248	330,201,758
1922	103,667,740	155,607,105	259,274,845	90,627,326	349,902,171
1923	107,239,980	174,364,307	281,604,287	99,739,138	381,343,425
1924	141,629,260	191,921,240	333,550,500	106,363,410	439,913,910

(c) *Revenue and Expenditure.* Particulars of the revenue and expenditure of municipalities for the year ending 31st December, 1924, under various headings, are given below :—

MUNICIPALITIES, NEW SOUTH WALES.—REVENUE AND EXPENDITURE, 1924.

Particulars.	Sydney.	Suburbs.	Country.	Total.
REVENUE.				
	£	£	£	£
General fund	2,855,443 (*a*)	1,774,063	1,092,606	2,866,669 (*b*)
Trading accounts		35,133	625,109	660,242 (*b*)
Special and local funds ..		60,203	306,537	366,740 (*b*)
Gross revenue ..	2,855,443	1,869,399	2,024,252	6,749,094
EXPENDITURE.				
General fund	2,666,616 (*a*)	1,980,639	1,098,646	3,079,285 (*b*)
Trading accounts		24,183	507,598	531,781 (*b*)
Special and local funds ..		59,320	277,682	337,002 (*b*)
Gross expenditure ..	2,666,616	2,064,142	1,883,926	6,614,684

(*a*) Items of revenue and expenditure for the city of Sydney cannot be allocated to the different headings shown for municipalities. (*b*) Exclusive of Sydney.

The next table shows the gross revenue and expenditure of all municipalities for the five years 1920 to 1924 :—

MUNICIPALITIES, NEW SOUTH WALES.—REVENUE AND EXPENDITURE, 1920 TO 1924.

Municipalities.	1920.	1921.	1922.	1923.	1924.
GROSS REVENUE.					
	£	£	£	£	£
Sydney	1,724,858	2,068,153	2,348,854	2,568,357	2,855,443
Suburban	1,200,139	1,413,469	1,561,760	1,709,262	1,869,399
Country	1,357,065	1,582,055	1,701,288	1,836,654	2,024,252
Total	4,282,062	5,063,677	5,611,902	6,114,273	6,749,094
GROSS EXPENDITURE.					
Sydney	1,747,972	2,060,635	2,187,856	2,371,043	2,666,616
Suburban	1,145,765	1,511,543	1,618,413	1,790,120	2,064,142
Country	1,293,564	1,507,423	1,637,140	1,711,734	1,883,926
Total	4,187,301	5,079,601	5,443,409	5,872,897	6,614,684

(*d*) *Assets and Liabilities.* The financial position of the municipalities as at the 31st December, 1924, is shown by the following statement of assets and liabilities.

MUNICIPALITIES, NEW SOUTH WALES.—ASSETS AND LIABILITIES, 1924.

Particulars.	Sydney.	Suburbs.	Country.	Total.
ASSETS.				
	£	£	£	£
Bank balances and cash ..	18,479,941 (*a*)	343,467	359,343	702,810 (*b*)
Outstanding rates		99,203	182,047	281,250 (*b*)
Sundry debtors		121,894	211,031	332,925 (*b*)
Stores and materials ..		32,258	98,184	130,442 (*b*)
Land, buildings, furniture, etc.		963,936	4,445,048	5,408,984 (*b*)
Other		31,490	39,887	71,377 (*b*)
Total	18,479,941	1,592,248	5,335,540	25,407,729
LIABILITIES.				
Loans, outstanding interest and sundry creditors ..	17,779,157 (*a*)	2,037,149	1,574,585	3,611,734 (*b*)
Debts due to Government and interest thereon		79,776	2,093,927	2,173,703 (*b*)
Bank overdrafts		213,283	174,075	387,358 (*b*)
Other		41,061	48,957	90,018 (*b*)
Total	17,779,157	2,371,269	3,891,544	24,041,970

(*a*) Particulars for the city of Sydney cannot be allocated to the different headings shown for municipalities. (*b*) Exclusive of Sydney.

(iii) *Shires.* (*a*) *Summary.* The following table gives the number, area, population, and unimproved capital value of shires, together with the length of the roads, and the number of bridges and ferries therein. It is not possible to give the improved capital value or the assessed annual value, as shires are not compelled to make these valuations.

SHIRES, NEW SOUTH WALES.—SUMMARY, 1920 TO 1924.

Year.	No. of Shires.	Area.	Population.	Unimproved Capital Value.	Length of Roads.	Bridges.	Ferries.
	No.	sq. miles.	No.	£	miles.	No.	No.
1920	136	181,140	670,123	120,872,326	(*a*)	(*a*)	(*a*)
1921	136	181,140	676,130	130,834,456	85,458	3,627	175
1922	136	181,140	688,560	135,380,748	(*a*)	(*a*)	(*a*)
1923	136	181,140	691,000	140,392,104	(*a*)	(*a*)	(*a*)
1924	136	181,339	686,770	144,710,409	88,704	3,861	172

(*a*) Not available—collected triennially.

Of the 88,704 miles of roads, 18,369 were metalled or ballasted, 13,745 formed only, and 27,216 cleared only, the balance being natural surface.

(*b*) *Revenue and Expenditure.* The revenue and expenditure of shires for the years 1920 to 1924 are shown in the following table. Included in the receipts for 1924 are Government grants amounting to £265,524 :—

SHIRES, NEW SOUTH WALES.—REVENUE AND EXPENDITURE, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
REVENUE.					
General Fund—	£	£	£	£	£
General rates (including interest)	825,781	968,886	1,033,921	1,064,842	1,129,863
Government endowment	156,429	178,420	156,861	150,296	146,705
Public works	196,045	188,533	218,952	204,129	323,357
Health administration ..	79,410	84,014	88,165	98,532	103,500
Public services ..	14,630	15,540	16,052	15,712	15,885
Shire property ..	13,456	16,145	20,344	8,124	11,741
Miscellaneous	12,125	8,939	13,852	16,977	15,364
Special and Local Funds ..	57,540	87,124	99,960	157,547	190,271
Total revenue ..	1,355,416	1,547,601	1,648,107	1,716,159	1,936,686
EXPENDITURE.					
General Fund—					
Administrative expenses	146,762	140,300	168,802	158,362	159,719
Public works	994,731	1,187,349	1,245,857	1,268,550	1,467,867
Health administration ..	84,282	89,344	95,578	104,437	107,894
Public services ..	26,239	33,782	32,205	31,526	31,432
Shire property ..	14,935	18,721	18,518	7,041	8,524
Miscellaneous	8,589	9,418	11,626*a*	20,327*a*	24,236*a*
Special, Local, and Loan Funds	50,210	78,474	91,295	131,715	173,070
Total expenditure ..	1,325,748	1,557,388	1,663,881	1,721,958	1,972,742

(*a*) Includes interest on loans and overdraft—£7,597 in 1922, £13,185 in 1923, and £19,934 in 1924

(*c*) *Assets and Liabilities.* The finances of the shires at the end of the year 1924 showed an excess of assets of £348,002. The following table gives particulars of assets and liabilities as at the 31st December, 1924 :—

SHIRES, NEW SOUTH WALES.—ASSETS AND LIABILITIES, 1924.

Assets.	Amount.	Liabilities.	Amount.
	£		£
Bank balances and cash ..	319,324	Loans outstanding, interest and sundry creditors ..	739,428
Outstanding rates	170,270	Bank overdrafts	256,092
Sundry debtors	60,206	Other	115,193
Stores and materials ..	37,622		
Land, buildings, furniture, plant, machinery, etc.	867,722		
Other	3,571		
Total	1,458,715	Total	1,110,713

2. **Victoria.**—(i) *General.* Local Government is established throughout the State (with the exception of French Island), the various divisions being termed cities, towns, boroughs, or shires. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a general system of local government, and except in a few details are not subject to the provisions of the Local Government Act.

In addition to the endowment of £50,000, the municipalities received from the Government during the financial year 1924–25 a sum of £63,771 out of the Licensing

Fund as the equivalent for (*a*) fees for licences, (*b*) fees for the registration of brewers and spirit merchants, and (*c*) fines, penalties, and forfeitures incurred under the Licensing Act 1915.

The financial years of the cities of Melbourne and Geelong end on the 31st December and the 31st August respectively; those of all other municipalities on the 30th September.

(ii) *Municipalities.* (*a*) *Summary.* The following table shows the number of cities, towns, boroughs, and shires, with estimated population, number of ratepayers and dwellings, and value of ratable property for the years 1921 to 1925 inclusive :—

MUNICIPALITIES, VICTORIA.—SUMMARY, 1921 to 1925.

Year ending 30th September.	Number of Municipalities.	Estimated Population.	Number of Ratepayers (both sexes).	Estimated Number of Dwellings.	Estimated Value of Rateable Property.	
					Total.	Annual.
			CITIES, TOWNS, AND BOROUGHS.			
	No.	No.	No.	No.	£	£
1921.. ..	55	886,030	237,037	205,416*a*	193,947,624	10,864,184
1922.. ..	53	914,371*a*	245,589		210,501,055	11,869,636
1923.. ..	53	963,180	270,058	220,392	233,586,201	13,116,589
1924.. ..	53	998,950	279,292	229,066	264,693,364	14,964,345
1925.. ..	53	1,031,670	291,910	237,352	288,230,793	16,388,842
			SHIRES.			
1921.. ..	138	628,970	198,801	142,579*a*	205,555,121	10,350,524
1922.. ..	139	610,987*a*	201,956		215,984,328	10,875,948
1923.. ..	139	616,410	200,834	143,809	221,623,773	11,200,825
1924.. ..	139	627,420	213,317	147,830	235,274,597	11,816,074
1925.. ..	139	635,340	221,345	151,721	251,480,405	12,588,177

(*a*) Census figures.

(*b*) *Revenue and Expenditure.* The table hereunder shows the revenue from various sources, and the expenditure under various heads, exclusive of loan revenue and expenditure, of municipalities during the years 1920 to 1924 :—

MUNICIPALITIES, VICTORIA.—REVENUE AND EXPENDITURE, 1920 TO 1924.

Items.		1920.	1921.	1922.	1923.	1924.
				REVENUE.		
		£	£	£	£	£
Taxation	Rates	1,750,778	2,083,931	2,303,664	2,559,847	2,847,282
	Licences ..	135,383	126,952	137,036	152,437	155,009
	Dog fees ..	22,575	23,682	24,316	24,832	26,211
	Market and weighbridge dues ..	87,845	91,448	99,485	99,337	97,794
Government endowments and grants		74,563	65,581	75,627	60,607	87,783
Contributions for streets, etc.		73,182	84,936	111,983	141,484	180,502
Sanitary charges		116,096	133,244	146,559	162,129	175,520
Rents		85,517	92,717	102,784	108,502	125,544
Other sources		879,024	890,625	1,030,323	1,179,748	1,305,108
Total		3,224,963	3,593,116	4,031,777	4,488,923	5,000,753

MUNICIPALITIES, VICTORIA.—REVENUE AND EXPENDITURE, 1920 TO 1924—*continued*.

Items.	1920.	1921.	1922.	1923.	1924.
EXPENDITURE.					
	£	£	£	£	£
Salaries, etc.	246,851	284,158	319,430	340,319	359,493
Sanitary work, street cleaning etc.	306,775	345,834	363,706	396,524	433,220
Lighting	102,945	115,968	130,722	131,342	134,025
Fire brigades' contributions	39,637	46,512	48,526	49,225	55,412
Public Works Construction	208,326	238,165	271,007	294,711	404,661
Public Works Maintenance	1,385,347	1,683,619	1,865,549	1,948,582	2,525,846
Formation of private streets, etc.	82,746	130,125	147,612	163,660	343,978
Redemption of loans	128,664	133,786	136,090	165,675	180,987
Interest on loans	264,147	276,065	305,289	343,164	386,946
Charities	25,031	29,468	26,436	26,288	28,550
Other expenditure	313,650	315,085	332,067	356,199	393,545
Total	3,104,119	3,598,785	3.946,434	4,215,689	5,246,663

(*c*) *Assets and Liabilities.* The assets of municipalities may be classified under three heads (*a*) the municipal fund, (*b*) the loan fund, and (*c*) property; the liabilities under two heads—(*a*) the municipal fund, and (*b*) the loan fund. The following table shows the amount of municipal assets and liabilities for the years 1920 to 1924:—

MUNICIPALITIES, VICTORIA.—ASSETS AND LIABILITIES, 1920 TO 1924.

Items.	1920.	1921.	1922.	1923.	1924.
ASSETS.					
MUNICIPAL FUND—	£	£	£	£	£
Uncollected rates	133,573	158,301	176,830	202,251	231,623
Other assets	483,724	591,508	636,509	730,603	1,098,843
LOAN FUND—					
(*a*) Sinking funds—					
Amount at credit	489,332	523,834	430,689	455,766	500,214
Arrears due	3,098	483	511	670	127
(*b*) Unexpended balances	221,405	331,561	442,360	526,622	501,858
PROPERTY—					
Buildings, markets, etc.	4,077,892	4,457,527	4,804,008	5,170,071	5,773,520
Waterworks	270,147	256,169	253,520	255,737	264,630
Gasworks	117,704	123,454	129,020	145,874	174,660
Total	5,796,875	6,442,837	6,873,447	7,487,594	8,545,475
LIABILITIES.					
MUNICIPAL FUND—					
Arrears due sinking funds	3,098	483	511	670	127
Overdue interest	7,091	5,379	6,026	8,054	7,445
Bank overdrafts	442,326	542,462	858,733	665,866	892,893
Other liabilities	281,675	352,518	389,340	440,031	767,691
LOAN FUND—					
Loans outstanding	5,192,069	5,595,614	5,714,570	6,601,731	7,574,523
Due on loan contracts	220,188	158,009	177,755	380,839	237,695
Due on current contracts	85,368	102,191	88,936	155,233	161,031
Total	6,231,815	6,756,656	7,235,871	8,252,424	9,641,405

3. Queensland.—(i) *General.* The whole of the State is incorporated into cities, towns, and shires under the Local Authorities Act of 1902 and its amendments.

(ii) *Municipalities.* (*a*) *Summary.* The following table gives particulars of the area, population, number of inhabited dwellings, and assets and liabilities of cities and towns and of shires for the years 1920 to 1924 :—

MUNICIPALITIES, QUEENSLAND.—SUMMARY, 1920 TO 1924.

Year.	No.	Area.	Population.	Number of Inhabited Dwellings.	Capital Value.	Assets.	Liabilities.	
							Government Loans.	Total.
				CITIES AND TOWNS.				
		sq. miles.	No.	No.	£	£	£	£
1920 ..	35	510	330,044	69,340	19,066,071	2,161,774	457,170	1,867,186
1921 ..	36	522	339,420	71,257	19,350,707	2,579,726	506,131	2,081,724
1922 ..	36	522	343,799	71,887	19,486,391	2,402,864	540,520	2,251,373
1923 ..	36	537	354,187	73,874	20,606,516	2,674,349	589,715	2,540,921
1924 ..	35	506	364,754	75,846	21,222,982	3,013,574	597,996	3,095,887
				SHIRES.				
1920 ..	135	669,384	422,683	95,173	47,259,059	723,871	299,361	513,623
1921 ..	134	669,372	423,857	99,364	49,051,635	800,451	338,681	620,180
1922 ..	134	669,372	427,739	96,840	50,284,568	846,102	365,863	623,086
1923 ..	134	669,627	446,943	98,608	51,041,891	1,037,880	448,390	799,755
1924 ..	135	669,388	460,240	101,494	51,858,728	1,134,466	568,848	934,278

(*b*) *Revenue and Expenditure.* The revenue and expenditure (including loan moneys) of cities and towns, and of shires for each year from 1920 to 1924, are given hereunder :—

MUNICIPALITIES, QUEENSLAND.—REVENUE AND EXPENDITURE, 1920 TO 1924.

Year.	Revenue.			Expenditure.			
	Rates.	Government Loans and Subsidies.	Total.	Public Works and Services.	Loan Redemption.	Office Expenses and Salaries.	Total
				CITIES AND TOWNS.			
	£	£	£	£	£	£	£
1920 ..	700,321	180,110	1,024,834	774,969	30,234	76,703	1,074,648
1921 ..	791,259	94,453	1,025,504	842,567	32,696	92,194	1,180,420
1922 ..	868,996	59,652	1,139,009	960,770	32,892	86,639	1,309,288
1923 ..	913,182	77,736	1,492,209	1,057,611[a]	34,907	87,320	1,432,525
1924 ..	943,558	49,165[b]	1,646,754	1,353,797[a]	29,659	99,519	1,801,017
				SHIRES.			
1920 ..	616,025	123,554	860,043	618,287	18,136	110,603	831,807
1921 ..	666,951	86,237	844,834	671,997	22,732	134,380	925,953
1922 ..	723,478	62,424	933,771	665,229	24,545	119,776	922,811
1923 ..	740,433	93,536	1,139,324	879,942[a]	27,523	126,302	1,141,111
1924 ..	817,873	282,575[b]	1,216,646	944,876[a]	29,875	148,695	1,256,880

(*a*) Includes Expenditure on Main Roads.
(*b*) Includes Money received from Main Roads Board.

4. South Australia.—(i) *General.* A large proportion of South Australia is unincorporated, the balance being under municipal corporations in the larger cities and towns, and district councils in outside areas. These bodies are subsidized by Government, and special grants allocated on the recommendation of the Roads Advisory Board are given for the maintenance and construction of main roads.

(ii) *Local Authorities.* (*a*) *Summary.* During the past five years the number of corporations and district councils has increased by 7, the total being 191, of which 10 corporations and 13 district councils are in the metropolitan area, and 27 corporations and 141 district councils in outside areas. According to the latest available information there are 955 miles of roads under the control of corporations and about 42,439 miles under the control of district councils, and of these totals, 14½ miles are wood-blocked and 10,529 miles macadamized. The following table gives the area, population, number of occupied dwellings, capital and assessment values and outstanding loans for corporations and district councils separately for the years 1920 to 1924:—

LOCAL AUTHORITIES, SOUTH AUSTRALIA.—SUMMARY, 1920 TO 1924.

Year.	Area.	Estimated Population.	Occupied Dwellings.	Capital Value.	Assessment Value.	Outstanding Loans.
			MUNICIPAL CORPORATIONS.			
	Acres.	No.	No.	£	£	£
1920	53,949	208,022	45,674	44,106,632	2,300,858	343,643
1921	53,959	214,730	46,782	47,980,109	2,421,920	382,293
1922	59,279	220,555	48,120	51,100,946	2,544,974	439,319
1923	59,279	223,875	49,260	54,983,943	2,759,282	443,893
1924	62,699	232,044	51,441	60,792,222	3,095,439	481,060
			DISTRICT COUNCILS.			
1920	29,602,382	259,096	57,548	60,184,690	2,938,336	35,797
1921	29,605,269	264,712	57,630	63,510,162	3,160,976	38,131
1922	30,196,509	272,104	59,737	68,293,518	3,429,776	35,358
1923	30,177,455	282,266	62,223	74,949,756	3,747,623	43,848
1924	30,535,351	285,759	63,572	81,665,583	4,083,357	47,249

(*b*) *Revenue and Expenditure.* The next table gives the revenue and expenditure of corporations and district councils for the years 1920 to 1924, showing in separate columns the receipts and expenditure on main roads. The financial year of municipal corporations ends on the 30th November and that of district councils on the 30th June.

LOCAL AUTHORITIES, SOUTH AUSTRALIA.—REVENUE AND EXPENDITURE, 1920 TO 1924.

Year.	Local Government (exclusive of Government Grants Account).						Government Grants Account (Main Roads).	
	Revenue.			Expenditure.				
	Rates.	Subsidies.	Total.	Roads.	Other Public Works.	Total.	Revenue.	Expenditure.
				MUNICIPAL CORPORATIONS.				
	£	£	£	£	£	£	£	£
1920 ..	233,645	27,347	364,200	115,013	163,260	379,709	16,703	17,113
1921 ..	279,992	29,094	420,060	147,129	184,966	444,782	23,927	21,559
1922 ..	315,772	29,328	470,183	185,758	188,756	500,421	33,222	35,364
1923 ..	346,844	34,576	511,078	248,270	204,314	584,005	25,637	22,541
1924 ..	382,008	38,538	567,344	240,902	201,698	609,446	28,010	27,486
				DISTRICT COUNCILS.				
1920 ..	180,414	37,730	298,953	179,862	52,891	310,676	128,345	114,891
1921 ..	212,801	43,316	315,166	189,332	40,048	318,614	208,608	180,891
1922 ..	242,591	50,101	356,359	213,557	53,323	361,290	171,756	185,092
1923 ..	277,563	56,281	407,980	222,574	59,380	403,194	217,267	213,615
1924 ..	317,583	64,966	464,414	262,124	54,289	445,463	241,544	235,246

5. Western Australia.—(i) *General.* In this State there are three forms of local authorities, namely :—(*a*) municipalities, (*b*) district road boards, and (*c*) local boards of health, the two former covering the whole of the State. Local boards of health are of three descriptions, (*a*) municipal, the members being the same as those of the municipal council of the municipality in which each is situated, (*b*) those under the control of road boards, and (*c*) those not under the control of road boards or municipalities. Several of the two latter are inactive. The financial year of municipalities and municipal boards of health terminates on the 31st October, and that of road boards and other local boards of health on the 30th June.

(ii) *Municipalities.* (*a*) *Summary.* The following table gives various particulars regarding municipalities for the years 1921 to 1925. For population and number of dwellings in 1921, the census figures for 4th April, 1921, have been taken.

MUNICIPALITIES, WESTERN AUSTRALIA.—SUMMARY, 1921 TO 1925.

Year ended 31st Oct.—	Municipalities.	Area.	Population.	Dwelling Houses.	Valuation of Ratable Property.		Length of Roads and Streets.
					Capital Value.	Annual Value.	
	No.	Acres.	No.	No.	£	£	Miles.
1921 ..	22	60,911	166,222	34,537	29,947,232	1,673,545	1,140
1922 ..	21	58,981	162,561	35,137	29,492,571	1,710,389	992
1923 ..	21	58,981	172,881	35,498	31,054,031	1,810,173	993
1924 ..	21	58,981	172,427	35,498	32,881,961	1,910,798	994
1925 ..	21	58,981	172,866	35,550	35,315,316	1,982,967	997

(*b*) *Revenue and Expenditure.* Revenue and expenditure of municipalities during the years 1921 to 1925 are given hereunder :—

MUNICIPALITIES, WESTERN AUSTRALIA.—REVENUE AND EXPENDITURE, 1921 TO 1925.

Year ended 31st October—	Revenue.				Expenditure.			
	From Rates.	From Govt. Grants.	From other sources.	Total.	Works and Improvements.	Disbursements in respect of Loans.	Other Expenses.	Total.
	£	£	£	£	£	£	£	£
1921 ..	250,356	710	531,589	782,655	132,011	156,123	461,547	749,681
1922 ..	263,008	300	571,394	834,702	180,537	173,038	493,635	847,210
1923 ..	277,993	939	593,937	872,869	202,758	190,738	471,140	864,636
1924 ..	287,863	4,372	738,040	1,030,275	236,050	191,618	599,952	1,027,620
1925 ..	297,143	200	860,140	1,157,483	300,799	214,226	561,578	1,076,603

(*c*) *Assets and Liabilities.*—The table below shows the assets and liabilities of municipalities at the 31st October in each financial year 1921 to 1925 :—

MUNICIPALITIES, WESTERN AUSTRALIA.—ASSETS AND LIABILITIES, 1921 TO 1925.

Year ended 31st October—	Assets.				Liabilities.	
	Balance in Hand.	Value of Property.	Accrued Sinking Funds.	Total.	Outstanding Debentures and Bonds.	Total.
	£	£	£	£	£	£
1921	64,687	1,514,671	409,879	2,089,501	1,782,471	1,890,307
1922	45,461	1,533,276	412,578	2,100,799	1,767,562	1,857,490
1923	48,580	1,574,805	477,016	2,212,099	1,802,782	1,894,126
1924	51,460	1,570,010	449,007	2,193,487	1,864,993	1,961,763
1925	136,917	1,580,435	487,670	2,329,990	2,135,132	2,253,841

(iii) *District Road Boards.* (*a*) *Summary.* In the next table the unimproved values given are approximate, allowance being made for three districts for which the annual values only are available. In other instances the annual value is also given, and those portions of districts rated under the annual value are not included in the area rated under the unimproved capital value. The population at the date of the census of 4th April, 1921, was 160,970, and the number of dwellings 41,662.

On the 30th June, 1925, the population was estimated at 195,337, and the number of dwelling-houses at 47,412. Nine districts, however, only give figures at time of the 1921 census.

DISTRICT ROADS BOARD, WESTERN AUSTRALIA.—SUMMARY 1921 TO 1925.

Year ended 30th June—	Number of Road Districts.	Area.	Unimproved Capital Value (Approximate).	Length of Roads in Existence.	Assets.	Liabilities.	Outstanding Loans.
	No.	sq. miles.	£	miles.	£	£	£
1921 ..	119	975,820	14,547,000	36,506	307,521	219,660	154,411
1922 ..	121	975,828	15,088,027	37,238	356,270	286,423	172,984
1923 ..	121	975,828	16,175,944	38,907	379,649	292,915	210,755
1924 ..	122	975,828	17,310,185*a*	39,863	418,060	348,690	242,043
1925 ..	123	975,828	18,444,720*a*	41,666	448,318	388,403	280,089

(*a*) Incomplete.

(*b*) *Revenue and Expenditure.* The revenue and expenditure of district road boards are shown in the following table for the years 1921 to 1925:—

DISTRICT ROAD BOARDS, WESTERN AUSTRALIA.—REVENUE AND EXPENDITURE, 1921 TO 1925.

Year ended 30th June—	Revenue.				Expenditure.			
	Rates.	Government Grants.	Other.	Total.	Administration.	Works.	Other.	Total.
	£	£	£	£	£	£	£	£
1921 ..	149,904	39,172	85,659	274,735	36,891	179,317	69,008	285,216
1922 ..	166,161	35,976	87,182	289,319	38,348	185,477	83,326	307,151
1923 ..	193,018	56,518	120,202	369,738	38,704	203,267	105,315	347,286
1924 ..	213,848	74,184	146,743	434,775	44,233	288,014	113,604	445,851
1925 ..	233,770	66,516	186,452	486,738	46,166	299,204	140,092	485,462

(iv) *Local Boards of Health.* (*a*) *General.* On the 31st October, 1925, there were 21 local boards of health within municipalities, and on the 30th June, 1925, 78 under control of road boards, and 24 extra-municipal boards. Of the latter, 3 under the control of road boards and 6 extra-municipal boards were inactive during the year.

(*b*) *Finances.* The appended table shows the number of boards, their revenue and expenditure, and the assets and liabilities of such as were active from 1921 to 1925. As already stated, the financial year of municipal boards ends on the 31st October, and that of other boards on the 30th June.

LOCAL BOARDS OF HEALTH, WESTERN AUSTRALIA.—FINANCES, 1921 TO 1925.

Year.	Number.	Revenue.			Expenditure.		Assets.	Liabilities.
		Rates.	Sanitary Charges and Rubbish Fees.	Total.	Sanitary and Rubbish Service.	Total.		
		£	£	£	£	£	£	£
1921 ..	126	57,194	63,484	133,021	89,709	131,400	83,875	20,872
1922 ..	126	56,362	65,786	133,280	87,479	129,941	85,768	17,689
1923 ..	125	56,523	70,700	140,056	89,430	133,191	88,456	16,192
1924 ..	122	60,255	66,378	137,047	92,324	136,099	89,311	16,549
1925 ..	123	55,907	68,738	145,844	92,236	148,265	84,526	16,348

6. **Tasmania.**—(i) *General.* The whole State, with the exception of the cities of Hobart and Launceston, which were incorporated under separate Acts, is divided into municipal districts.

(ii) *Municipalities.* (*a*) *Summary.* The following table gives the number of municipalities, valuations, outstanding loans and length of roads for the years 1920 to 1924. The latest available figure for inhabited dwellings is for the year 1921, when the number was 45,950.

MUNICIPALITIES, TASMANIA.—SUMMARY, 1920 TO 1924.

Year.	Number of Municipalities.	Valuations.			Outstanding Loans.	Length of Roads.
		Annual Value.	Unimproved Value.	Total Capital Value.		
HOBART AND LAUNCESTON.						
	No.	£	£	£	£	Miles.
1920	2	688,290	5,435,180	11,902,005	1,637,550	178
1921	2	771,297	5,768,348	13,112,954	1,700,128	178
1922	2	784,945	6,139,362	14,123,587	1,924,252	179
1923	2	887,583	6,388,152	15,140,686	2,017,691	187
1924	2	984,592	6,711,549	16,521,819	2,062,609	195
COUNTRY MUNICIPALITIES.						
1920	47	1,246,500	13,899,687	26,834,221	345,963	11,461
1921	47	1,347,839	14,670,035	28,436,345	534,127	11,563
1922	47	1,396,941	14,735,436	29,034,047	407,719	11,557
1923	47	1,423,174	15,168,896	30,318,877	417,535	11,725
1924	47	1,472,749	15,535,414	31,180,993	464,286	11,692

(*b*) *Revenue and Expenditure.* The next table gives the revenue and expenditure of all municipalities for the years 1920 to 1924:—

MUNICIPALITIES, TASMANIA.—REVENUE AND EXPENDITURE, 1920 TO 1924.

Year.	Revenue.			Expenditure.			
	Rates.	Government Grants.	Total.	Administration.	Works and Services.	Interest and Sinking Fund.	Total.
HOBART AND LAUNCESTON.							
	£	£	£	£	£	£	£
1920 ..	125,620	1,347	533,235	14,620*a*	279,462	266,163	560,245
1921 ..	159,094	250	626,855	24,579*a*	285,904	97,237	408,944
1922 ..	178,921	2,056	577,707	29,491*a*	403,555	110,716	544,133
1923 ..	234,313	1,263	641,070	28,361*a*	336,961	125,297	613,380
1924 ..	244,006	450	555,868	47,619	206,668*b*	132,449	545,928*b*
COUNTRY MUNICIPALITIES.							
1920 ..	129,812	27,725	223,825	31,311	140,648	23,087	209,815
1921 ..	144,531	27,889	261,162	35,798	167,870	22,797	248,468
1922 ..	156,408	30,694	269,388	36,038	193,188	24,248	270,386
1923 ..	167,616	26,026	267,674	36,003	181,087	28,438	264,395
1924 ..	179,297	31,745	284,769	37,697	129,730*c*	28,421	27,802*c*

a Hobart only (Launceston figures not available). *b* Excluding from Loans, £58,975.
c Excluding from Loans, £71,451.

7. **Northern Territory.**—(i) *Municipality of Darwin.* The following particulars relate to the year 1924–25:—Area, 2,024 acres, population 886, number of occupied dwellings 226, of unoccupied dwellings 5, and of other buildings 130. Revenue from general rates £1,364, from Government grants £665, other sources £279, total £2,308; expenditure £2,559.

(ii) *Bagot Road District.* During the year 1924–25 the receipts amounted to £168, and the expenditure to £253, leaving (with a balance of £270 brought forward from the previous year) a balance in hand of £185.

8. **Basis for Municipal Rating and Limits for Rates.**—These matters were dealt with at some length in Official Year Book, No. 17, pp. 124–25, but limitations of space preclude their repetition in the present issue.

§ 4. Summary of Municipal Finance.

1. **General.**—In the preceding parts of this chapter certain particulars have been given regarding local authorities in each individual State. In this paragraph, comparative figures are given for each State regarding the financial operations of the local governing bodies referred to in § 3. The particulars in the next two tables refer to financial years as follows:—New South Wales: calendar year 1924. Victoria: 30th September, 1924, except Melbourne, 31st December, and Geelong, 31st August, 1924. Queensland: calendar year 1924. South Australia: Corporations, 30th November, and district councils, 30th June, 1924. Western Australia: Municipalities, 31st October, 1924, district road boards, 30th June, 1924. Tasmania: calendar year 1924.

2. **Number, Revenue, Expenditure, and Valuation of Local Authorities.**—The subjoined table shows the number, revenue, expenditure, and valuation of local authorities in each State and in Australia during the years indicated above. It should be noted that, excepting in Tasmania, the metropolitan water supply systems are not under municipal control; the particulars given of revenue and expenditure for the five States other than Tasmania do not, therefore, include revenue and expenditure on account of these systems.

LOCAL AUTHORITIES IN EACH STATE.—FINANCIAL SUMMARY, 1924.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aus.	W. Aust.	Tasmania.	Total.
No. of local authorities	317	192	170	191	143	49	1,062
RECEIPTS.							
	£	£	£	£	£	£	£
Rates— General ..	8,685,780	2,847,282	1,761,431	699,591	387,366	423,303	20,156,932
Other		454,534			114,345		
Government grants, etc. ..		87,783	1,101,969	373,058	78,556	32,195	
Loans and other sources ..		1,611,154		228,663	884,783	385,139	
Total ..	8,685,780	5,000,753	2,863,400	1,301,312	1,465,050	840,637	20,156,932
EXPENDITURE.							
Works, services, etc.	8,587,426	3,841,730	2,298,673	1,021,745	1,021,438	466,824	20,637,473
Interest on loans and overdrafts		386,946	(*e*)	295,896	104,112	160,870	
Redemptions, sinking funds, etc. ..		180,987	59,534		111,555		
Administration ..		359,493	699,690		105,008	85,316	
Other		477,507			131,358	241,365	
Total ..	8,587,426	5,246,663	3,057,897	1,317,641	1,473,471	954,375	20,637,473
VALUATIONS.							
Capital value of property ..	*a* 291,932,037	539,711,198	73,081,710	142,457,805	*c* 50,192,146	47,702,812	(*b*)
Annual value of property ..	(*b*)	28,977,019	(*b*)	7,178,796	(*d*) 1,910,798	2,457,341	(*b*)

(*a*) Unimproved capital value of all ratable property. (*b*) Not available. (*c*) The valuation of road districts is the unimproved capital value. (*d*) Excluding district road boards. (*e*) Included with "Other."

3. **Local Government Loans, 1924.**—The following table shows the amount of loans raised by local authorities during the year 1924, of loans current at the end of that year, of liability on account of interest and sinking fund, and of loans redeemed during 1924:—

LOCAL AUTHORITIES.—LOANS, 1924.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
Loans raised during year ..	2,532,775	1,158,177	517,576	78,558	228,851	205,603	4,721,540
Loans current at end of year	16,348,686	7,574,523	3,036,745	528,309	2,107,036	2,526,895	32,122,194
Annual liability on account of interest	767,575	(*a*)	60,884	28,575	108,101	160,701	(*a*)
Total sinking fund at end of year	1,459,555	500,341	196,610	24,685	410,357	317,080	2,908,628
Amount of loans redeemed during year	202,910	(*a*)	(*a*)	38,141	137,290	99,783	(*a*)

(*a*) Not available. (*b*) Approximate.

§ 5. Water Supply, Sewerage, and Drainage.

1. **New South Wales.**—(i) *General.* In Sydney and its suburbs the water supply and sewerage systems are controlled by the Metropolitan Water, Sewerage and Drainage Board, and in Newcastle and its suburbs by the Hunter District Water Supply and Sewerage Board. In country districts, both waterworks and sewerage works are constructed by the Public Works Department, and, when completed, handed over to the municipalities affected, by which the cost must be repaid.

(ii) *Metropolitan Waterworks.* (*a*) *General.* During the year ended 30th June, 1925, the mileage of water mains laid was 150 miles, as against 127 miles in the preceding year, making the total length in sizes from 3 inches to 72 inches in diameter, 3,283 miles. A tunnel 10 miles long and 10 feet in diameter to convey water to the city is being constructed. A 48-in. main was laid to supply water to the northern suburbs, and a reservoir to contain 19,900,000 gallons was constructed in Centennial Park. Important amplification works are in process of construction.

(*b*) *Water Supplied, etc.* The following table gives the number of houses and estimated population supplied, and other details for the years 1921 to 1925 :—

WATERWORKS, SYDNEY.—WATER SUPPLIED, 1921 TO 1925.

Year ended 30th June—	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Supply.	Total Supply for the Year.	Average Daily Supply.		Mains Laid.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 Gallons.	1,000 Gallons.	Gallons.	Gallons.	Miles.
1921 ..	221,886	1,109,430	48,496	17,701,000	218	43.71	128
1922 ..	229,274	1,146,370	51,002	18,616,000	222	44.49	118
1923 ..	239,528	1,197,640	56,595	20,657,319	236	47.26	126
1924 ..	250,804	1,254,020	58,628	21,458,036	234	46.78	126
1925 ..	259,799	1,298,995	57,355	20,934,784	221	44.15	150

(*c*) *Finances.* The next table gives details of the finances for the years 1921 to 1925 :—

WATERWORKS, SYDNEY.—FINANCES, 1921 TO 1925.

Year ended 30th June —	Revenue.	Working Expenses.	Capital Cost, exclusive of Items on which Interest is not charged.	Percentage of Working Expenses on Revenue.	Percentage of Revenue on Capital Cost.	Interest Payable on Capital Cost.	Net Profit after Paying Working Expenses and Interest.
	£	£	£	%	%	£	£
1921 ..	855,751	347,298	10,323,252	40.58	8.28	473,889	34,564
1922 ..	923,798	376,203	11,130,857	40.72	8.30	543,164	4,431
1923 ..	992,702	363,102	12,019,600	36.58	8.26	597,351	32,249
1924 ..	1,105,098	380,407	13,094,176	34.42	8.43	648,011	76,680
1925 ..	1,103,682	*a*409,578	14,734,046	37.11	7.49	691,237	2,867

(*a*) Includes payment of £4,881 14s. 10d. to State Debt Commissioners in reduction of Capital Indebtedness.

(iii) *Metropolitan Sewerage Systems.* (*a*) *General.* In addition to the usual progress made in connecting additional houses, 44 miles of new sewers were laid, the total length now being 1,358 miles. The quantity of sewage pumped was 3,999 million gallons.

(*b*) *Houses Drained, Population Served, Length of Sewers, etc.* Particulars for the years 1921 to 1925 are given hereunder :—

SEWERAGE SYSTEMS, SYDNEY.—PARTICULARS OF SERVICES, 1921 TO 1925.

Year ended 30th June—	Number of Houses Drained.	Estimated Population Served.	Total Length of Sewers.	Total Length of Storm-water Drains.	Ventilating Shafts Erected.	Sewers Ventilated.
	No.	No.	Miles.	Miles.	Feet.	Miles.
1921	148,923	744,615	1,196.96	63.73	514,536	1,096
1922	153,789	768,945	1,226.96	63.73	527,766	1,122
1923	159,390	796,950	1,273.71	65.70	532,470	1,162
1924	165,215	826,075	1,313.90	65.96	543,306	1,208
1925	170,774	853,870	1,358.19	66.37	556,032	1,246

(*c*) *Finances.* The following table contains information under this heading for the sewerage branch of the Metropolitan Water, Sewerage and Drainage Board for the years 1921 to 1925 :—

SEWERAGE SYSTEMS, SYDNEY.—FINANCES, 1921 TO 1925.

Year ended 30th June—	Revenue.	Working Expenses.	Capital Cost, exclusive of Items on which Interest is not charged.	Percentage of Working Expenses on Revenue.	Percentage of Revenue on Capital Cost.	Interest Payable on Capital Cost.	Profit or Loss after Payment of Working Expenses and Interest.
	£	£	£	%	%	£	£
1921 ..	615,615	229,441	7,329,632	37.27	8.39	341,674	44,500
1922 ..	683,434	244,916	7,553,906	35.83	9.05	373,671	64,847
1923 ..	661,964	231,672	7,857,504	34.99	8.42	395,152	35,140
1924 ..	756,539	244,480	8,145,061	32.31	9.28	409,721	102,338
1925 ..	756,624	*a*277,696	8,462,426	36.70	8.94	411,686	67,242

(*a*) Includes payment of £3,273 16s. 2d. to State Debt Commissioners in reduction of Capital Indebtedness.

(iv) *Newcastle Water Supply.* (*a*) *General.* No works of great importance were completed during the year ended 30th June, 1925, but 22 miles of water mains were laid, bringing the total up to 548 miles. The construction of the works in connexion with the Chichester Dam and pipe line has been completed, but the capital expenditure on such works has not yet been determined.

(*b*) *Particulars of Services.* The following table supplies details for the years 1921 to 1925 :—

NEWCASTLE WATER SUPPLY.—SUMMARY, 1921 TO 1925.

Year ended 30th June—	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Supply.	Total Quantity Supplied for the Year.	Average Daily Suply.		Mains Laid.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 gallons.	1,000 gallons.	Gallons.	Gallons.	Miles.
1921 ..	25,874	129,370	4,688	1,711,187	181	36.23	14
1922 ..	26,758	133,790	4,626	1,688,537	173	34.57	13
1923 ..	28,036	140,180	4,806	1,754,417	171	34.28	29
1924 ..	29,568	147,840	5,756	2,106,614	195	38.92	21
1925 ..	31,405	157,025	6,334	2,312,045	201	40.34	22

(*c*) *Finances.* The next table gives the revenue, working expenses, capital debt, and net profit for the years 1921 to 1925:—

NEWCASTLE WATER SUPPLY.—FINANCES, 1921 TO 1925.

Year ended 30th June—	Revenue.	Working Expenses.	Capital Debt.	Percentage of Working Expenses on Revenue.	Percentage of Revenue on Capital Debt.	Interest and Sinking Fund.	Profit or Loss after Paying Working Expenses, Interest, and Sinking Fund.
	£	£	£	%	%	£	£
1921 ..	116,320	59,895	1,379,427	51.49	8.43	46,299	10,126
1922 ..	113,217	63,736	1,819,534	56.29	6.22	50,785	– 1,304
1923 ..	110,076	62,155	2,271,295	56.47	4.85	54,632	– 6,761
1924 ..	143,138	63,883	2,730,003	44.63	5.24	58,701	20.554
1925 ..	153,045	53,319	3,046,823	34.84	5.02	61,543	38,183

NOTE.—The minus sign (—) represents loss.

The capital debt in respect of water supply set down as £3,046,823 includes expenditure amounting to £2,042,838 on the incomplete Chichester Scheme, which was vested in the Board on 26th June, 1925. The capital expenditure in respect of transferred works is £1,003,985. The percentage of revenue on transferred (and, therefore, revenue-producing) works is 15.24 per cent. as against 5.02 per cent. on total debt.

(v) *Newcastle Sewerage Works.* (*a*) *General.* The sewerage works for Newcastle and suburbs as originally designed have been completed by the Department of Public Works and vested in the Board.

The amplification, extension, and improvement of such sewerage works have been reported upon by an Engineering Experts Committee and referred by the Minister for Public Works to the Parliamentary Standing Committee on Public Works for report to Parliament.

The Engineering Experts Committee is inquiring into the question of the amplification, extension and improvement of the stormwater drainage works of the Newcastle district. The works comprised in the Cottage Creek stormwater area have been authorized and are under construction.

(*b*) *Sewerage Connexions and Length of Sewers.* During the year ended 30th June, 1925, the number of properties connected with sewers was 1,321, making a total of 16,927. New sewers of a total length of 4 miles were constructed by the Board, bringing the total length of sewers under the Board's control to 170 miles.

(*c*) *Finances.* Particulars in regard to chief items for the years 1921 to 1925 are given hereunder:—

NEWCASTLE SEWERAGE.—FINANCES, 1921 TO 1925.

Year ended 30th June—	Revenue.	Working Expenses.	Capital Debt.	Percentage of Working Expenses on Revenue.	Percentage of Revenue on Capital Debt.	Interest and Sinking Fund.	Profit or Loss after Paying Working Expenses, Interest, and Sinking Fund.
	£	£	£	%	%	£	£
1921 ..	32,164	16,007	555,513	49.77	5.79	30,577	–14,420
1922 ..	39,477	18,863	577,833	47.78	6.83	34,446	–13,832
1923 ..	49,551	19,[illegible]92	592,148	39.74	8.37	36,172	– 6,313
1924 ..	56,210	21,915	610,849	38.99	9.20	37,033	– 2,788
1925 ..	63,707	21,910	636,475	34.39	10.01	37,326	4,471

NOTE.—The minus sign (—) represents loss.

(vi) *Water Supply and Sewerage in Country Towns.* (*a*) *General.* Under the Local Government Act of 1919 the Public Works Department may upon application by any municipal council construct, out of moneys voted by Parliament therefor, waterworks and sewerage works, and when completed transfer the control thereof to the council. The cost must be repaid in instalments, with interest fixed by the Governor, spread over a period not exceeding one hundred years.

(*b*) *Waterworks.* Up to the 30th June, 1925, waterworks had been completed in 68 towns and handed over to the respective municipal or shire councils, with the exception of the Junee Water Supply, which has been placed under special administration, and the Grafton Water Supply, which is vested in a Board composed of three members of the Grafton council and three members of the South Grafton council. The capital debt of all waterworks on the date mentioned was £1,840,279, and the annual amount payable in instalments and for interest was £81,307. The water supply of Broken Hill, on which loan expenditure to the amount of £481,220 was incurred, was constructed under a special Act, and the undertaking is administered by the Minister for Public Works. A few municipalities have also constructed waterworks out of their own resources.

(*c*) *Sewerage Works.* Sewerage and stormwater drainage works were completed in twenty municipalities at the 30th June, 1925. The capital debt thereon amounted to £634,457, and the amount payable annually in instalments and for interest to £29,712.

2. Victoria.—(i) A. *The Melbourne and Metropolitan Board of Works.* (*a*) *General.* All land within 13 miles of the General Post Office is included within the metropolitan area for water supply and sewerage purposes. This area covers 434 square miles of land area, and in 1925 embraced 21 cities, 2 towns and part of another, 1 borough, and parts of 13 shires, or a total of 38 municipalities or portions thereof. The whole of the town of Mordialloc and of the shire of Moorabbin are included in the metropolis for water supply purposes, and the Board is also empowered to supply water to certain municipalities outside the 13-mile radius, to the Metropolitan Farm at Werribee, the outfall-sewer area, and elsewhere. Various other shires also arrange for bulk supplies of water. The liability on the 30th June, 1925, for loans raised by the Board, was £15,584,650. The Board is still empowered to borrow £1,055,284 before reaching the limit of its borrowing powers.

(*b*) *Revenue and Expenditure.* The following table shows the actual receipts and expenditure, and the loan receipts and expenditure of the Board from 1920–21 to 1924–25 :—

WATER SUPPLY AND SEWERAGE, MELBOURNE.—REVENUE AND EXPENDITURE, 1920-21 TO 1924-25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
ORDINARY RECEIPTS.					
	£	£	£	£	£
Water supply	419,474	446,875	500,671	545,835	587,765
Sewerage, etc.	404,234	454,521	542,698	472,074	521,205
Live stock—Metropolitan farm ..	43,975	19,994	42,045	85,059	77,763
Interest { Water supply ..	1,021	1,917	4,587	12,427	10,178
Interest { Sewerage	8,737	8,477	11,306	11,190	16,503
Total	877,441	931,784	1,101,307	1,126,585	1,213,414
ORDINARY EXPENDITURE.					
General management	59,420	65,612	64,027	68,803	73,739
Live stock, etc.—Metropolitan farm	68,742	53,162	46,632	101,311	86,546
Maintenance { Water supply ..	67,131	62,919	65,551	81,991	80,557
Maintenance { Sewerage ..	78,037	74,861	60,548	74,459	76,877
Interest { Water supply ..	156,645	179,034	203,569	238,572	283,145
Interest { Sewerage	369,204	411,828	430,418	441,567	475,680
Patriotic, Relief Funds, etc. ..	104	80	10	..	..
Sinking fund investment ..	4,813	..	..	..	..
Pensions and Compensation Allowances	..	6,007	5,756	5,562	9,061
Total	804,096	853,503	876,511	1,012,265	1,085,605

WATER SUPPLY AND SEWERAGE, MELBOURNE.—REVENUE AND EXPENDITURE, 1920–21 TO 1924–25—*continued.*

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
LOAN RECEIPTS.					
	£	£	£	£	£
Water supply	7,016	11,748	19,074	18,588	19,015
Sewerage	47,769	46,120	61,959	61,992	58,348
Proceeds of loans	543,616	1,573,326	749,410	1,260,716	1,783,293
Miscellaneous	3,196	17,497	25,978	21,875	28,557
Alterations to water mains ..	..	..	..	..	5,426
Alterations to sewers	..	..	..	..	3,785
Total	601,597	1,648,691	856,421	1,363,171	1,898,424
LOAN EXPENDITURE.					
	£	£	£	£	£
Water supply construction ..	119,744	316,329	297,365	348,483	540,938
Sewerage construction	257,240	300,818	351,006	425,653	546,356
Renewals, main outfall ..	..	..	2,280	1,654	874
Cleaning rising main	..	..	..	1,156	2,409
Alterations to water mains ..	..	..	..	..	11,341
Alterations to sewers	..	..	..	..	869
Expenses in floating and redemption of loans	378,820	1,111,814	80,840	954,774	707,785
Miscellaneous	46,478	82,222	49,911	106,081	102,500
Total	802,282	1,811,183	781,402	1,837,801	1,913,072

B. *Melbourne Water Supply.* (*a*) *Progress of Work.* The principal works completed or in hand during the year ended 30th June, 1925, were :—Construction of Maroondah Dam (upper portion and outlet tower); clearing site for O'Shannassy Dam; construction of O'Shannassy Dam; raising lining of O'Shannassy Aqueduct 41,756 lineal feet; metalling Wood's Point-road through O'Shannassy Watershed 10,375 lineal feet; duplication of O'Shannassy Pipe Line; permanent survey of inlet and outlet channels and reservoir site at Silvan; clearing site of dam for Silvan Reservoir; construction of reinforced concrete elevated tank at Mitcham; laying 8 miles 77 chains of 12-in. electrically-welded steel main—Morang to Broadmeadows; delivery of steel locking-bar pipes 24 inches diameter for new main—Caulfield Reservoir to Elwood and St. Kilda; laying 85 miles 62¾ chains of reticulation pipes under 12 inches diameter in various parts of the metropolis; cleaning 134 miles 46¼ chains of water mains.

(*b*) *Quantity of Water, Number of Houses, and Population Supplied.* The following table gives various particulars for the years 1921 to 1925. The rate levied over the period has remained at sixpence in the pound.

WATER SUPPLY, MELBOURNE.—PARTICULARS OF SERVICES, 1921 TO 1925.

Year ended 30th June—	Number of Houses Supplied. (*a*)	Estimated Population Supplied. (*a*)	Average Daily Consumption.	Total Water Consumption for the Year.	Average Daily Consumption.		Length of Mains, Reticulation, etc.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 Gallons.	1,000 Gallons.	Gallons.	Gallons.	Miles.
1921 ..	174,274	771,348	46,772	17,071,857	268.4	60.6	1,783
1922 ..	181,226	802,144	47,661	17,396,103	263.0	59.4	1,857
1923 ..	190,108	842,179	51,206	18,690,114	269.3	60.8	1,931
1924 ..	201,548	892,858	47,642	17,436,949	236.4	53.4	2,011
1925 ..	211,405	936,522	52,563	19,185,605	248.6	56.1	2,102

(*a*) 31st December of previous year.

(*c*) *Capital Cost, Revenue, Expenditure and Surplus.* The following table shows the total cost of construction, revenue, working expenses (exclusive of renewals and special war expenditure), interest and surplus for the five years ending 30th June, 1925, together with the total amounts to that date :—

WATER SUPPLY, MELBOURNE.—FINANCES, 1921 TO 1925.

Year ended 30th June—	Capital Cost.	Revenue.	Working Expenses.	Percentage of Working Expenses on Revenue.	Interest.	Surplus.
	£	£	£	%	£	£
1921	112,025	407,093	*a* 78,755	19.34	*b* 173,550	154,788
1922	310,578	438.399	*a* 86,925	19.82	*b* 196,746	154,728
1923	285,352	507,475	*a* 85,407	16.83	*b* 217,723	204,345
1924	314,521	524,165	*a* 86,853	16.57	*b* 247,883	189,429
1925	513,523	579,502	*a* 97,992	16.91	*b* 294.845	186,665
Total to date ..	6,504,316	12,351,298	2,121,787	17.18	5,406,977	4,822,534

(*a*) Exclusive of Renewals. (*b*) Includes Interest on Renewals and Sinking Funds.

C. *Melbourne Sewerage.* (*a*) *Progress of Work—By Contract.* At the Pumping Station at Spotswood, additional electrical centrifugal pumps have been installed, viz., one of 18 million gallons per day capacity and two each of a capacity of 12 million gallons per day. These are now in full commission. They are operated by 50-cycle current supplied from Newport "B" generating station. Venturi meters have been fitted to all the electric pumps, and the quantity of sewerage dealt with can now be ascertained accurately. In the past it was only possible to estimate this. The Pumping Station has been completely converted to electric drive three-phase current, 440 volts 25 cycles and 415 volts 50 cycles being used. Included in the year's cost is an amount of £3,000 for preliminary expenses in connexion with this conversion. All the normal daily sewage is pumped by the electric pumps, whilst certain of the reciprocating steam pumps are held in readiness to deal with stormwater and emergencies. The total volume of sewage pumped during the year 1925 was 13,449,080,000 gallons, or 36,846,795 gallons per day. Notwithstanding the increased pumping of 364,710,000 gallons of sewage for the year, there has been a slight addition to the unit cost of raising 1,000 gallons 100 feet, the cost for 1924–25 being .535d. as against .525d. for the year 1923–24. This, however, still compares very favourably with .650d., the cost in 1920–21, when steam pumps only were used.

At the present time—in the northern and southern buildings at the Pumping Station, Spotswood—the two sewerage systems can still be handled wholly by electric energy or partly by steam, either separately or unitedly. The normal procedure, however, is to deal with everything by means of the electrical pumps in the southern building. The nominal capacity of the five electrical centrifugal pumping units amounts to 78 million gallons of sewage daily. In addition, the seven reciprocal steam-driven pumps of 300 horse-power have a combined daily capacity of 56 million gallons, making the total available capacity equal to 134 million gallons of sewage per day. The usual practice is to deal with the normal daily load of about 36 million gallons of sewage with two 50-cycle and one 25-cycle electric pumps, the remaining two being left in reserve, while the heavy peak loads which, through storm-water entering the sewers, are sometimes experienced, are handled either by the steam engines or the remaining electric pumps, according to circumstances.

One main, two intercepting sewers, and three branch sewers were completed ; twenty-six reticulation areas (including two reticulation areas carried out in connexion with branch sewers) and 55 minor reticulation extensions were also completed. An intercepting and a relieving sewer and three branch sewers were in progress ; five reticulation areas and three minor reticulation extensions were also in progress. *By Day Labour.* One main and one branch sewer were completed, also 196 minor reticulation extensions, 2,442 branches and short pieces of reticulation, and 19 alterations. At 30th June, 1925, there were 26 separate contracts and day labour jobs in progress, ranging in cost from £100 to £17,141.

(*b*) *Number of Houses Connected, etc.* Particulars of services for the years 1921 to 1925 are given below :—

SEWERAGE, MELBOURNE.—PARTICULARS OF SERVICES, 1921 TO 1925.

Year ended 30th June—	Number of Houses for which Sewers are Provided. (*a*)	Estimated Population for which Sewers are Provided. (*a*)	Average Daily Pumping.	Total Sewage Pumped for the Year.	Average Daily Pumping.		Length of Sewers, etc.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 Gallons.	1,000 Gallons.	Gallons.	Gallons.	Miles.
1921 ..	160,345	710,328	37,846	13,813,897	236.0	53.3	1,733
1922 ..	164,413	728,350	39,236	14,320,960	238.6	53.9	1,774
1923 ..	171,125	758,084	36,335	13,262,326	212.3	47.9	1,812
1924 ..	179,183	793,781	35,750	13,084,370	199.5	45.0	1,861
1925 ..	187,153	829,085	36,847	13,449,080	196.9	44.4	1,925

(*a*) 31st December of previous year.

(*c*) *Finances.* The capital cost, revenue, working expenses (exclusive of renewals), percentage of working expenses on revenue, interest and deficiency for the years 1921 to 1925 are given below :—

SEWERAGE, MELBOURNE.—FINANCES, 1921 TO 1925.

Year ended 30th June—	Capital Cost.	Revenue.	Working Expenses.	Percentage of Working Expenses on Revenue.	Interest.	Deficiency.
	£	£	£	%	£	£
1921	203,324	411,177	*a* 119,304	29.01	*b* 378,023	86,150
1922	242,220	441,516	*a* 121,045	27.41	*b* 422 295	101,824
1923	263,050	552,643	*a* 116,804	21.14	*b* 438,577	2,738
1924	337,740	480,748	*a* 119,571	24.87	*b* 451,168	89,991
1925	441,275	537,657	*a* 129,050	24.00	*b* 485,027	76,420
Total to date	9,364,855	7,931,399	1,865,001	23.51	8,389,050	2,322,652

(*a*) Exclusive of Renewals. (*b*) Includes interest on Renewals and Sinking Funds.

(*d*) *Metropolitan Sewerage Farm.* On 30th June, 1925, the total area of the farm was 13,601 acres. The following table gives details in connexion therewith for the years 1921 to 1925 :—

METROPOLITAN SEWAGE FARM.—FINANCES, 1921 TO 1925.

Year ended 30th June—	Capital Cost.	Revenue.	Working Expenses.	Interest.	Net Cost of Sewage Purification.	Trading Profit.
	£	£	£	£	£	£
1921	21,245	22,925	*a*22,744	23,550	23,369	15,750
1922	12,472	2,993	*a*23,588	28,711	49,306	(*b*) 4,837
1923	28,654	20,282	*a*26,441	29,744	35,903	11,285
1924	36,081	28,903	*a*26,786	31,995	29,878	19,968
1925	19,136	30,298	*a*26,413	34,471	30,586	21,688
Total to date ..	695,727	558,306	316,373	599,348	323,501	314,928

(*a*) Exclusive of Renewals. (*b*) Loss.

(ii) *Geelong Waterworks and Sewerage Trust.* (*a*) *General.* The Geelong Waterworks and Sewerage Trust, constituted in 1908, consists of five commissioners, two of whom represent the city of Geelong, one the town of Geelong West, one the town of Newtown and Chilwell, and one the shires of Bellarine, Corio and South Barwon jointly. The amount of loan money which may be raised is limited to £725,000 for water supply undertaking, £610,000 for sewerage undertaking, and £220,000 for sewerage installation to properties under the deferred payment system. The population supplied is about 40,000.

(*b*) *Water Supply.* The catchment area is about 16,000 acres. The works comprise the Korweinguboora Reservoir and the Bolwarra Weir on Eastern Moorabool River, together with the necessary channels, mains and reservoirs. The storage capacity of all the reservoirs is 2,709,835,280 gallons, and there are 212½ miles of reticulation mains within the city of Geelong and its suburbs. The total expenditure on waterworks to the 30th June, 1925, was £508,629, and the revenue for the year 1924–25 was £45,729.

(*c*) *Sewerage Works.* The sewerage scheme consists of a main outfall sewer to the ocean at Black Rock, about 9 miles from Geelong, and 101.2 miles of reticulation mains have already been laid. The drainage area is 9,351 acres, and the number of buildings within the drainage area is 9,500, and within the sewered areas 8,827, while 8,094 buildings have been connected with the sewers. Up to 30th June, 1925, the total expenditure on sewerage works was £482,132 and on the cost of sewerage installations under deferred payment conditions £182,894. The revenue amounted to £37,928.

(iii) *Bendigo Sewerage Authority.* The members of the Bendigo City Council constitute this Authority. The sewerage district comprises the whole area of the city of Bendigo. The works when completed are estimated to cost £250,000, and comprise treatment works consisting of (*a*) non-septic liquefying tanks and oxidizing chambers without filters, but with land disposal of effluent for irrigating grass and crops ; (*b*) main outfall sewer, main, sub-main, branch, and reticulation sewers, of which over 29½ miles had been constructed by the end of March, 1926, at which date 1,593 premises had been connected to sewers, An unique feature of the scheme is the entire omission of the " boundary trap " from house sewers with resulting omission of " induct vent " to house sewers and the omission of all ventilation on street sewers, the main and reticulation sewers all being amply ventilated by the house sewer ventilation, while the resulting all round saving both of first cost and maintenance is considerable. Expenditure to end of March, 1926, was £215,166.

(iv) *Water Supply in Country Towns and Districts.* Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but a number of other waterworks is controlled by Waterworks Trusts or by municipal corporations.

The following table gives particulars regarding waterworks under the control of trusts and municipal corporations for the years 1921 to 1925 :—

COUNTRY WATERWORKS, VICTORIA.—FINANCES, 1921 TO 1925.

Year.	Under Waterworks Trusts.				Under Municipal Corporations.			
	Number of Trusts.	Capital Cost.	Capital Indebtedness.	Current Interest Outstanding.	Number of Corporations.	Capital Cost.	Capital Indebtedness.	Current Interest Outstanding
	No.	£	£	£	No.	£	£	£
1921 ..	98	1,215,526	905,842	10,171	29	784,465	512,185	2,300
1922 ..	98	1,256,973	936,112	11,342	29	785,602	509,358	1,590
1923 ..	98	1,278,847	949,510	15,178	29	785,602	506,475	3,152
1924 ..	99	1,322,315	983,663	13,712	29	785,602	503,890	9,811
1925 ..	102	1,383,538	1,036,516	14,545	29	785,788	500,595	3,329

3. **Queensland.**—(i) *The Metropolitan Water Supply and Sewerage Board, Brisbane.* (*a*) *General.* Since the filtration works on Holt's Hill were put into operation, the whole of the water supply in the metropolitan area is filtered. There are now eleven filters in operation. The service reservoirs on Bartley's Hill, Highgate Hill, Wickham Terrace, and Tarragindi Hill have a total capacity of about 21,000,000 gallons. The 42-in. trunk main, commenced in 1923, has been completed and put into commission, and a large portion of the 36-in. trunk main from Kenmore to Tarragindi Hill Reservoir is also complete. The first unit of the three new engines now being installed at Mt. Crosby Pumping Station is now in daily use. A weir across the Brisbane River at Mt. Crosby is now approaching completion, and will add considerably to the storage of water. A pumping scheme is in progress for the betterment of the supply from Lake Manchester. Works are in progress for combining Gold Creek and Enoggera Reservoirs waters with the object of increasing the supply into certain districts. A complete scheme for a reservoir on Eildon Hill with new 24-in. trunk main and other distributing mains was prepared during the year. In December, 1925, the construction of a reinforced concrete elevated water tower to hold 100,000 gallons was undertaken at Paddington Heights for the betterment of the water supply to the higher areas.

(*b*) *Brisbane Waterworks. Summary.* The following table gives a summary of operations for the last five years :—

WATERWORKS, BRISBANE.—SUMMARY, 1921 TO 1925.

Year.	Length of Reticulation Mains.	Number of Tenements Connected.	Estimated Population Supplied.	Quantity Supplied.	Average Daily Supply.	Average Daily Supply per Head of Estimated Population.
	Miles.	No.	No.	1,000 Gallons	Gallons.	Gallons.
1921	546½	42,408	206,685	3,360,747	9,207,527	44.54
1922	576½	46,025	221,080	3,648,833	9,996,805	45.22
1923	620½	48,368*a*	235,980	4,292,246	11,759,579	46.76
1924	645¾	50,152*a*	246,300	4,378,486	11,963,078	44.68
1925	675	53,119*a*	258,175	4,703,044	12,885,052	45.80

(*a*) Metropolitan area.

The total length of the trunk mains is 140¾ miles.

(c) *Brisbane Sewerage Scheme.* The power house sub-stations and pumping stations have been completed, the permanent plant installed, and the electrical transmission line erected. The permanent pumping units in use are electrically driven by power transmitted from the City Electric Light Co. Treatment works are in operation, while 20½ miles of main sewer and 70 miles of reticulation sewers and house connexion branches have been constructed and 4,746 premises have been connected.

(d) *Brisbane Waterworks and Sewerage Works Finances.* The subjoined table gives particulars regarding finance during the years 1921 to 1925 :—

WATER AND SEWERAGE WORKS, BRISBANE.—FINANCES, 1921 TO 1925.

Year.	Capital Cost.	Net Revenue.	Working Expenses.	New Works Construction.	Interest and Redemption of Loans, including Sinking Fund.
	£	£	£	£	£
1921	4,057,994	269,505	97,379	396,414	105,259
1922	4,618,211	305,450	105,397	560,217	188,038
1923	5,475,473	339,915	116,367	857,261	232,247
1924	6,330,764	402,272	146,585	855,291	303,201
1925	6,924,496	481,571	169,035	593,732	368,295

(ii) *Country Towns Water Supply.* At the end of the year 1924 thirty-two country towns in Queensland were provided with water supply systems constructed by municipalities chiefly from Government loans. A statement in regard to the finances of these water supply systems for the year 1924 is given below :—

COUNTRY WATER SUPPLY SYSTEMS, QUEENSLAND, 1924.

Cost of Construction to 31*st December*, 1924—£1,422,857.

Receipts.	£	*Expenditure.*	£
Rates and sales of water ..	150,904	Office and salaries	19,284
Government and other loans ..	220,383	Construction	234,530
Other	16,657	Maintenance	66,750
		Interest and redemption ..	47,890
		Other expenses	25,187
Total receipts	387,944	Total	393,641
Assets	1,121,274	Liabilities	852,023

4. **South Australia.**—(i) *General.* The water supply and sewerage systems in this State are constructed and maintained by the Public Works Department.

(ii) *Adelaide Waterworks.* (a) *Summary.* The following table gives particulars for the years 1920–21 to 1924–25, the figures for consumption being recorded by gaugings taken at the reservoirs and including evaporation and absorption. There are 54,202 meters in the Adelaide district.

ADELAIDE WATERWORKS.—SUMMARY, 1920-21 TO 1924-25.

Year ended 30th June—	Number of Assessments	Annual Value.	Area Supplied.	Capacity of Reservoirs.	Length of Mains.	Annual Consumption.
	No.	£	Acres.	Million Gallons.	Miles.	1,000 Gallons.
1921	84,995	2,584,704	106,465	7,753	991	a5,179,000
1922	87,279	2,781,473	111,295	7,753	1,010	a5,873,000
1923	91,903	3,337,345	111,295	7,753	1,034	6,599,000
1924	100,002	3,794,755	111,295	7,753	1,076	6,720,000
1925	104,301	4,202,080	111,872	7,753	1,108	6,836,000

(a) For previous year ending 31st December.

(b) *Finances.* Particulars for the years 1920–21 to 1924–25 are given below :—

ADELAIDE WATERWORKS.—FINANCES, 1920-21 TO 1924-25.

Year ended 30th June—	Capital Cost.	Revenue.		Expenses.			Percentage of Net Revenue on Capital Cost.
		Rates.	Total.	Engineering Branch.	Revenue Branch.	Total.	
	£	£	£	£	£	£	%
1921 ..	2,768,769	107,665	177,722	42,700	9,678	52,378	4.53
1922 ..	2,843,507	134,472	204,996	43,811	9,956	53,767	5.32
1923 ..	2,924,702	167,465	232,478	47,532	9,737	57,269	5.99
1924 ..	3,100,856	194,158	268,574	53,673	10,972	64,645	6.58
1925 ..	3,166,088	220,151	280,327	59,020	11,193	70,213	6.64

(iii) *Adelaide Sewerage.* Particulars for the years 1920–21 to 1924–25 are given hereunder :—

ADELAIDE SEWERAGE.—SUMMARY, 1920-21 TO 1924-25.

Year ended 30th June—	Length of Sewers.	Number of Connexions.	Capital Cost of Revenue-Producing Works.	Revenue.		Working Expenses.		Percentage of Net Revenue on Capital Cost.
				Rates, etc.	Total.	Maintenance, etc.	Total.	
	Miles.	No.	£	£	£	£	£	%
1921 ..	368	40,168	894,085	74,582	87,183	16,222	28,587	6.55
1922 ..	373	41,240	946,213	79,562	90,525	17,083	29,893	6.41
1923 ..	390	42,879	997,604	83,266	98,657	17,356	29,514	6.93
1924 ..	406	45,415	1,095,683	87,066	100,707	19,428	29,646	6.49
1925 ..	424	47,413	1,166,066	95,464	105,188	19,616	28,826	6.55

(iv) *Country Towns Water Supply.* (a) *Summary.* The chief items of information regarding these undertakings are set forth in the table below for the years 1920–21 to 1924–25.

COUNTRY TOWNS WATERWORKS, SOUTH AUSTRALIA.—SUMMARY, 1920-21 TO 1924-25.

Year ended 30th June—	Number of Assessments.	Area Supplied.	Capacity of Reservoirs.	Length of Mains.	Annual Consumption.
	No.	Acres.	Million Gallons.	Miles.	1,000 Gallons.
1921	58,552	4,847,295	4,978	3,136	770,030*a*
1922	57,623	4,850,448	4,978	3,176	823,123*a*
1923	60,552	4,933,732	6,350	3,257	1,071,094
1924	60,200	11,252,740*b*	8,679	3,415	984,714
1925	60,684	11,565,800*b*	8,679	3,600	1,181,706

(*a*) For previous year ending 31st December. (*b*) Includes the new Todd River Water District on Eyre Peninsula.

(*b*) *Finances.* The next table gives financial information for the years 1920–21 to 1924–25 :—

COUNTRY TOWNS WATERWORKS, SOUTH AUSTRALIA.—FINANCES, 1920-21 TO 1924-25.

Year ended 30th June—	Capital Cost.	Revenue.		Working Expenses.			Percentage of Net Revenue on Capital Cost.
		Rates.	Total.	Engineering Branch.	Revenue Branch.	Total.	
	£	£	£	£	£	£	%
1921 ..	4,168,876	73,024	110,656	42,084	7,220	49,304	1.47
1922 ..	4,368,091	66,527	96,373	50,475	7,821	58,296	0.87
1923 ..	4,562,092	78,649	105,865	56,039	8,034	64,073	0.90
1924 ..	5,200,184	84,241	120,599	66,007	8,303	74,310	0.89
1925 ..	6,754,682	93,124	126,032	58,840	8,077	66,917	0.87

(v) *Other Sewerage Systems.* Information in summarized form is given below regarding the two suburban sewerage systems, viz., the Glenelg system and the Port Adelaide and Semaphore system, for the years 1920–21 to 1924–25 :—

SUBURBAN SEWERAGE SYSTEMS, SOUTH AUSTRALIA.—SUMMARY, 1920-21 TO 1924-25.

Year ended 30th June—	Length of Sewers.	Number of Connexions.	Capital Cost.	Revenue.		Working Expenses.		Percentage of Net Revenue on Capital Cost.
				Rates.	Total.	Maintenance.	Total.	
	Miles.	No.	£	£	£	£	£	%
1921 ..	59	5,216	372,520	10,507	11,606	10,148	10,607	0.27
1922 ..	63	5,868	400,198	12,145	13,520	10,347	10,978	0.64
1923 ..	67	6,576	423,620	13,055	14,449	12,693	13,307	0.27
1924 ..	72	7,208	451,709	17,538	18,855	14,595	15,165	0.81
1925 ..	78	7,756	475,340	19,552	20,884	9,118	9,755	2.34

5. Western Australia.—(i) *General.* The water supply and sewerage systems of Western Australia are all under the management of Government Departments, and are divided into the following categories :—(*a*) Metropolitan Water Supply, Sewerage and Drainage, covering Perth, Fremantle, Claremont, Guildford, Midland Junction, and Armadale District, (*b*) Goldfields Water Supply, (*c*) Water Supply of other towns, (*d*) Agricultural Water Supply, (*e*) other Mines Water Supply, and (*f*) artesian and sub-artesian waters. The consumption of water by the railways is not included in figures for water supplied given hereunder.

(ii) *Metropolitan Water Supply, Sewerage and Drainage.* (*a*) *General.* The sources of the metropolitan water supply are the Victoria Reservoir, Bickley Brook, Mundaring Reservoir, thirteen bores and the Armadale, Churchman Brook, Canning River, and Wungong pipe head dams. The sewerage system consists of septic tanks and percolating filters for Perth, and septic tanks and ocean outfall for Fremantle. At the 30th June, 1925, the number of houses connected with sewers was 15,678.

(*b*) *Summary.* The following table gives particulars regarding water supply for the years 1921 to 1925 :—

WATER SUPPLY, WESTERN AUSTRALIA.—SUMMARY, 1921 TO 1925.

Year ending 30th June—	Estimated Population Supplied.	Number of Houses Supplied.	Water Supplied.	Average Daily Supply.		Number of Meters.	Length of Mains.
				Per Head.	Per House.		
	No.	No.	1,000 Gallons.	Gallons.	Gallons.	No.	Miles.
1921	165,500	35,666	2,327,042	38.52	178.75	21,367	645
1922	168,540	36,641	2,600,697	42.28	194.46	21,5[illegible]1	659
1923	171,560	38,002	2,714,791	43.35	195.72	21,782	677
1924	174,580	39,386	3,089,825	48.36	214.93	22,114	700
1925	178,600	40,741	2,909,095	44.62	195.63	23,416	713

(*c*) *Finances.* The table hereunder gives separate information for the water supply and sewerage and drainage branches for the years 1921 to 1925 :—

WATER SUPPLY AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA.—FINANCES, 1921 TO 1925.

Year ended 30th June—	Water Supply.			Sewerage and Drainage.		
	Capital Cost.	Revenue.	Expenditure.	Capital Cost.	Revenue.	Expenditure.
	£	£	£	£	£	£
1921	1 223,951	113,439	117,136	958,452	61,961	71,773
1922	1 309,262	122,669	129,412	968,540	70,086	72,153
1923	1,410,442	126,028	134,316	1,015,930	74,771	74,777
1924	1,722,594	135,250	152,824	1,055,612	83,388	76,532
1925	2,162,771	140,811	169,011	1,150,261	91,073	78,830

(iii) *Goldfields Water Supply.* The source of supply for the Coolgardie and adjacent goldfields, as well as for places on or near the pipe-line, is the Mundaring Reservoir, which has a capacity of 4,650 million gallons. There are three classes of consumers—the railways, the mines, and "other," and in 1924–25 the railways consumed 13 per cent., the mines

28 per cent., and "other" 59 per cent. of the supply. The following table gives details for the years 1921 to 1925 :—

GOLDFIELDS WATER SUPPLY, WESTERN AUSTRALIA.—SUMMARY, 1921 TO 1925.

Year ended 30th June—	Total Consumption.	Number of Services.	Length of Water Mains.	Capital Cost.	Revenue.	Expenditure.
	1,000 gallons.	No.	Miles.	£	£	£
1921	1,130,000	12,238	1,219	3,427,300	187,010	311,070
1922	1,153,320	10,789	1,224	3,432,234	180,127	297,027
1923	1,169,000	10,899	1,234	3,445,059	178,495	217,680
1924	1,159,000	10,628	1,303	3,487,887	167,597	212,713
1925	1,139,000	10,706	1,371	3,544,274	178,495	215,517

(iv) *Water Supply of Other Towns.* During the year 1924–25 there were 14 towns provided with water supplies, apart from those in the metropolitan area and those supplied by the Goldfields Water Supply. The total supplies to these towns for the year ending 30th June, 1925, were as follows :—Domestic, 94,302,000 gallons ; Railways, 21,533,000 gallons ; Mines, 44,018,000 gallons. The estimated population was 14,400, and the average daily domestic consumption was 18 gallons per head.

(v) *Agricultural Water Supply.* During the year 1924–25, 10 tanks were excavated, and four wells sunk, of which four yielded fresh water. During the fifteen years from the 1st July, 1910, to the 30th June, 1925, 396 tanks were built, 312 wells sunk, and 2,678 bores put down to a total depth of 131,118 feet. Of the bores mentioned, 459 yielded fresh, and 238 stock-water.

(vi) *Artesian and Sub-artesian Waters.* Up to the 30th June, 1925, the total number of bores put down in search of artesian or sub-artesian water was 217, including 49 sunk in the metropolitan area, ranging in depth from 32 to 4,006 feet.

6. **Tasmania.**—(i) *Hobart Water Supply.* The cost of this undertaking to the 30th June, 1925, was £407,069, but a considerable amount of reticulation work has been done out of revenue and not charged to capital account. The outstanding loans at 30th June, 1925, amounted to £369,628. At the same date the number of tenements supplied in the city and suburbs was 10,107, the population 46,459, and the length of reticulation mains 110½ miles. The revenue and expenditure for the years 1921 to 1925 were as follows :

HOBART WATERWORKS.—REVENUE AND EXPENDITURE, 1921 TO 1925.

Heading.	1921.	1922.	1923.	1924.	1925.
	£	£	£	£	£
Revenue	30,671	36,798	35,494	34,965	34,935
Expenditure	33,773	33,697	35,494	34,965	34,935

(ii) *Hobart Sewerage System.* The revenue for the year ended 30th June, 1925, was £35,873. Up to that date 76½ miles of sewers had been laid in connexion with the original city system at a cost of £210,275, and 7,953 tenements connected. Since the original city was sewered, the Municipalities of Queenborough and New Town have been included in the city, and are now being sewered. In Queenborough 24 miles of sewers, connecting with 1,229 tenements, have been constructed at a cost of £116,591. In New Town a total of 25 miles of sewers has been laid, and 726 properties connected. The cost to 30th June, 1925, including surveys and sewerage outfall, was £84,920.

§ 6. Harbour Boards and Trusts.

1. **New South Wales.**—(i) *Sydney Harbour Trust.* (*a*) *General.* The Sydney Harbour Trust, which consists of three Commissioners appointed by the Government, controls the whole of the wharves resumed by the Government in 1901. The Commissioners also provide and maintain the lighting and marking of the harbour, and carry out all necessary dredging. The whole of what might be termed city wharves are owned by the Commissioners and leased to various shipping companies, but the Trust directly operates and maintains a certain number of open wharves. Outside the city area the wharves are, to a large extent, privately controlled, but all structures beyond high-water mark are held under leases issued by the Trust. The extent of wharfage accommodation now available for use totals 60,351 lineal feet, inclusive of 7,800 lineal feet privately owned.

The depth of water at the entrance to the port is not less than 80 feet and in the channels there are 40 feet of low-water at spring tides. The foreshores of Sydney Harbour are about 200 miles in length. The area of the water in the port is 14,284 acres, of which 3,000 acres have a depth ranging from 35 to 160 feet.

Since its inception, the Trust has spent £6,271,274 on the reconstruction and extension of the wharfage and improvements to the port. Over 12,000 lineal feet of old and obsolete wharfage have been demolished, and 35,650 lineal feet of new berths have been constructed. Other improvements include 2,439,348 square feet of floor area of new sheds and nearly 4 miles of new roadways.

During the year 1924, 1,603,700 tons of material were dredged at a cost of £54,416. In the process of towing such material, 44,705 miles were run at a cost of £36,253.

(*b*) *Finances.* The subjoined table gives particulars concerning the finances of the Trust for the years 1921 to 1925 :—

SYDNEY HARBOUR TRUST.—FINANCES, 1921 TO 1925.

Year ended 30th June.	Revenue.				Expenditure.	Total Capital Debt.	Interest.	Balance.
	Wharfage and Harbour Rates.	Tonnage Rates and Berthing Charges.	Other Sources.	Total.				
	£	£	£	£	£	£	£	£
1921 ..	429,986	43,577	323,648	797,211	244,764	9,449,213	438,210	114,237
1922 ..	451,981	44,465	330,676	827,122	261,120	9,868,165	488,552	77,450
1923 ..	517,740	39,570	294.931	852.241	253.614	10,129,113	514.756	83,871
1924 ..	553,295	44,879	299,183	897,357	276,883	10,417,859	528,743	91,731
1925 ..	587,157	58,735	324,510	970,402	283,040	10,644,468	526,944	160,418

2. **Victoria.**—(i) *Melbourne Harbour Trust.* (*a*) *General.* Information regarding the origin and constitution of this Trust will be found in Official Year Book No. 12, pp. 970 *et seq.* In 1925, the length of sheds in the port was 19,168 feet, covering an area of 1,108,824 square feet. The quantity of material raised by the dredging and excavation done in the improvement of the river and bay amounts to 81,376,967 cubic yards. The Trust has expended £338,528 in reclaiming land within its jurisdiction.

(*b*) *Finances.* The following table gives particulars of the revenue and expenditure of the Trust from 1921 to 1925 inclusive. Up to 31st December, 1925, the total capital expenditure amounted to £6,177,195.

MELBOURNE HARBOUR TRUST.—FINANCES, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
REVENUE.					
	£	£	£	£	£
Rates, rents, etc.	491,677	589,583	681,958	711,558	712,733
Interest	42	80	328	669	285
Other receipts	9,718	12,807	9,850	17,095	23,213
Total	501,437	602,470	692,136	729,322	736,231
EXPENDITURE.					
Management and general expenses ..	57,226	61,763	60,997	74,086	85,655
Interest	114,860	144,883	124,109	131,674	151,891
Total	172,086	206,646	185,106	205,760	237,546
Less standing charges added to works	30,862	34,628	37,272	43,749	48,128
Total	141,224	172,018	147,834	162,011	189,418
Wharfage and other refunds ..	3,064	3,866	5,728	4,879	3,761
Consolidated revenue of Victoria ..	96,224	114,986	135,520	140,382	136,494
Flotation of loans expenses	29,525	35	750	5	10
Redemption of loans expenses ..	615	..	..	..	..
Maintenance	120,412	126,051	85,458	130,234	166,610
Total expenditure	391,064	416,956	375,290	437,511	496,293
Surplus on revenue account ..	110 373	185,514	316,846	291,811	239,938
Less depreciation and renewals account and sinking fund	65,000	100,000	213,000	213,000	213,000
Net surplus on revenue account	45,373	85,514	103,846	78,811	26,938
CAPITAL EXPENDITURE.					
Land and property	2,461	11,906	32,892	548	37,699
Deepening waterways	81,699	98,331	150,885	137,488	145,808
Wharves construction	79,206	45,613	67,360	194,318	285,072
Approaches construction	1,565	9,084	7,519	25,483	46,130
Other harbour improvements ..	14,099	25,311	8,719	23,826	18,631
Floating plant	2,957	1,708	632	3,192	97,354
General plant	1,131	925	2,025	3,440	2,718
Total	183,118	192,878	270,032	388,295	633,412

(ii) *Geelong Harbour Trust.* (*a*) *General.* The Geelong Harbour Trust was constituted in 1905, and is under the control of three Commissioners appointed by the Governor in Council. The Commissioners have vested in them the Port of Geelong which includes Corio Bay, Portarlington, some miles of Bay frontage, and certain lands on the River Barwon and at Barwon Heads. The Commissioners have established facilities for the export of grain, frozen meat, and other produce, and have also constructed extensive abattoirs and freezing works. A large amount of money has been expended in the reclamation of waste lands, and on part of such lands a dairy farm with a complete system of drainage and irrigation has been established.

(*b*) *Finances.* The following table gives financial details for the years 1921 to 1925 :—

GEELONG HARBOUR TRUST.—FINANCES, 1921 TO 1925.

Year.	Loans.	Sinking Fund.	Revenue.	Expenditure.
	£	£	£	£
1921	591,000	28,667	49,636	53,605
1922	591,000	29,379	54,234	52,066
1923	591,000	33,045	58,680	56,065
1924	591,000	36,912	61,356	52,315
1925	591,000	41,167	70,730	57,027

3. **Queensland.**—(i) *Bowen Harbour Board.* (*a*) *General.* The Bowen Harbour Board consists of seven members, of whom two are appointed by the Governor in Council and the remainder elected by the electors of the Town of Bowen and adjacent shires. The district under its jurisdiction comprises the area within the boundaries of the Town of Bowen, the Shires of Proserpine and Wangaratta, and division I. of the Shire of Ayr.

(*b*) *Finances.* The capital expenditure to the 31st December, 1925, was £65,937, while for the year 1925 the receipts were £9,557 and the expenditure £6,502.

(ii) *Bundaberg Harbour Board.* (*a*) *General.* The Bundaberg Harbour Board consists of nine members, of whom one is appointed by the Governor in Council, four by the City of Bundaberg, and two each by the Shires of Goodburrum and Woongarra, these three municipalities comprising the Harbour Board District. The jurisdiction of the Board extends over the harbour of Bundaberg and certain lands adjacent to the River Burnett.

(*b*) *Finances.* The revenue for the year 1925 amounted to £7,335 as against £6,803 for the previous year, and the expenditure to £7,365 as compared with £5,423 for 1924.

(iii) *Cairns Harbour Board.* (*a*) *General.* The Cairns Harbour Board consists of twelve members, representing the town of Cairns and eight adjoining shires. The wharves at Cairns, which are all under the control of this Board, are of reinforced ferro-concrete and are 1,500 feet in length, while an additional 400 feet are under construction. Mechanical sugar-handling conveyors have been installed at a cost of over £38,465. The wharves are electrically lighted and furnished with railways and electric crane service. There is a special railway wharf with facilities for handling floater logs. A cold storage plant has been built at a cost of £9,000.

(*b*) *Finances.* During the year 1925 the revenue of the Board was £55,457, derived from harbour, berthage and miscellaneous dues.

(iv) *Gladstone Harbour Board.* (*a*) *General.* The Gladstone Harbour Board is composed of seven members, two of whom are appointed by the Governor in Council and five elected by the electors of the town of Gladstone and the shires of Calliope and Miriam Vale. The works under the control of the Board are (i) Auckland Point Jetty and Wharf, constructed of reinforced concrete and wood, the berth being 775 feet long, with an average depth alongside of 26 feet ; (ii) the municipal wharf in Auckland-street ; (iii) wool dumping plant on Auckland Point jetty, consisting of two hydraulic dumps, capable of doing either single or double dumping. Works under construction are (i) 15-ton electric crane for coal and timber for export ; (ii) extension of 208 feet to western end of existing jetty ; (iii) duplication of approach for mixed traffic ; (iv) additional approach to jetty shed.

(*b*) *Finances.* The total capital expenditure to the end of 1924 amounted to £89,892. The revenue for 1924 was £2,859, and the expenditure £3,064.

(v) *Mackay Harbour Board.* (*a*) *General.* The Mackay Harbour Board consists of nine members elected by the electors of the City of Mackay and four adjacent shires. The director wall in the Pioneer River is being raised and widened.

(*b*) *Finances.* The capital expenditure for the year 1925 was £4,528, while receipts amounted to £13,438 and the expenditure to £10,245.

(vi) *Rockhampton Harbour Board.* (*a*) *General.* The Rockhampton Harbour Board consists of eleven members, of whom seven are elected by the electors on the rolls for the city of Rockhampton, the town of Mount Morgan and the shires of Fitzroy and Livingstone. The remaining four are elected by the councillors of groups of inland shires.

In the port of Rockhampton, which comprises the tidal area of the Fitzroy River as far as the entrance to Keppel Bay, there are three principal places where steamers may lie and discharge cargo, viz., (i) Rockhampton itself, (ii) Port Alma, where the oversea steamers berth, and (iii) Broadmount, originally built for the oversea trade some years ago. The wharves at these three places are connected by rail with Rockhampton and with the main central line. The Board undertakes the work of improving the navigable channels throughout the estuary and river, and of maintaining the wharves at Port Alma and Rockhampton.

(*b*) *Finances.* The revenue for the year 1925 was £76,709, of which £43,107 represented loans, and the expenditure was £74,041, which included £11,582 interest on loans and overdraft.

(vii) *Townsville Harbour Board.* (*a*) *General.* The Townsville Harbour Board is composed of nine members, of whom two are appointed by the Governor in Council, and the remaining seven are elected by the electors of Townsville and adjacent towns and shires. All harbour works and conveniences for the use of shipping are under the control of the Board.

(*b*) *Finances.* The total expenditure since the inception of the Board is £1,633,573, while the receipts for the year 1925 were £58,326 and the expenditure £52,307.

(viii) *Harbour Boards—Financial Summary.* The following table shows the total revenue and expenditure of Queensland Harbour Boards and the outstanding loans for the years 1920 to 1924 :—

HARBOUR BOARDS, QUEENSLAND.—FINANCIAL SUMMARY, 1920 TO 1924.

Year.	Number of Boards.	Revenue.			Expenditure.			Outstanding Loans.
		Wharfage and Harbour Dues.	Government Loans.	Total.	Works and Maintenance.	Interest and Redemption of Loans.	Total.	
		£	£	£	£	£	£	£
1920	6	108,212	17,712	179,432	90,761	51,492	178.436	887,628
1921	7	117,417	46,219	183,949	101,563	65,452	199,341	979,341
1922	7	132,234	78,506	234,827	171,853	58,492	230,345	1,077,833
1923	7	142,848	120,281	320,105	233,894	56,156	290,050	1,209,022
1924	7	161,331	131,887	320,551	246.024	60,487	306,511	1,315,225

4. **Western Australia.**—(i) *Fremantle Harbour Trust.* (*a*) *General.* Fremantle Harbour is controlled by a Board of five Commissioners appointed by the Governor in Council. A description of the works was given in a previous Year Book (see No. 12, p. 973). Since that account was written, the inner harbour and entrance channel have been dredged to a depth of 36 feet below the lowest known low water. The berthage accommodation at all the quays has also been deepened to 36 feet.

(*b*) *Finances.* The following table gives financial data for the years 1921 to 1925 :—

FREMANTLE HARBOUR TRUST.—FINANCES, 1921 TO 1925.

Year ended 30th June—	Revenue.	Expenditure.	Gross Amount Paid to the Treasury.				
			Interest.	Sinking Fund.	Renewals Fund.	Surplus Revenue.	Total.
	£	£	£	£	£	£	£
1921	301,065	133,904	77,240	19.819	2,000	71,410	170,469
1922	282,038	126,597	80,218	20,277	2,000	56,491	158,986
1923	282,015	120,086	83,386	20,764	2,000	47,272	153,422
1924	357,450	146,177	85,703	21,185	2,000	96,612	205,500
1925	421,255	171,391	87,783	21,564	2,000	130,776	242,123

(ii) *Bunbury Harbour Board.* (*a*) *General.* The Bunbury Harbour Board consists of five members appointed by the Government. The jetty is 4,900 feet long, with berthage accommodation of 2,700 feet on the west side and 3,000 feet on the east side, and is electrically lighted. Vessels can load alongside to depths ranging from 16 to 27½ feet. Five electric and one steam gantry cranes, each of 3 tons lifting capacity, are available.

(*b*) *Finances.* Details for the last five years are given hereunder. Surplus revenue is paid into the Consolidated Revenue Fund to meet interest and sinking fund :—

BUNBURY HARBOUR BOARD.—FINANCES, 1921 TO 1925.

Year ended 30th June—	Capital Expenditure.	Revenue.	Expenditure.	Paid to Consolidated Revenue Fund.
	£	£	£	£
1921	417,611	28,980	8,843	20,137
1922	440,965	26,175	9,818	16,357
1923	448,377	25,746	8,749	16,997
1924	450,000	33,836	10,707	23,129
1925	450,000	37,625	17,001	22,000

5. **Tasmania.**—(i) *Marine Board of Hobart.* (*a*) *General.* The Marine Board of Hobart consists of nine wardens elected by the ship-owners of the Port of Hobart and the importers and exporters of goods into or from any port within the jurisdiction of the Board. The Board has jurisdiction over all ports, harbours and waters within the limits of the coast line from South-West Cape round the southern and eastern coasts to Cape Portland, and within all islands adjacent to such coast line. The duties of the Board are to maintain all wharves within its jurisdiction which are not vested in another authority or belonging to any private person, to construct new wharves where necessary, and to improve the navigation where desirable.

(*b*) *Finances.* The following table gives details for the years 1921 to 1925 :—

MARINE BOARD OF HOBART.—FINANCES, 1921 TO 30th JUNE, 1925.

Year.	Capital Debt.	Revenue.			Expenditure.			
		Harbour Improvements, Debentures, etc.	General.	Total.	Harbour Improvements.	Interest and Sinking Fund.	General.	Total.
	£	£	£	£	£	£	£	£
1921 ..	96,350	..	30,055	30,055	1,080	5,400	29,470	35,950
1922 (to 30th June) ..	92,350	..	16,133	16,133	3	3,265	11,975	15,243
1922–23 ..	90,350	..	32,620	32,620	373	6,511	25,670	32,554
1923–24 ..	86,806	2,456	37,465	39,921	15,787	6,180	20,304	42,271
1924–25 ..	86,302	300	38,764	39,064	4,192	6,220	25,644	36,056

(ii) *Marine Board of Launceston.* (*a*) *General.* The Marine Board of Launceston consists of five wardens elected by the ratepayers of the city of Launceston. The jurisdiction of the Board extends from Cape Portland along the north coast of Tasmania to Badger Head. The chief work carried out has been to deepen the channel of the River Tamar to 16 feet and to maintain the wharves. An important work completed in 1923 was the removal to a depth of 30 feet of Porpoise Rock, situated 4 miles from the entrance of the port. A deepwater port is being provided at Bell Bay. The wharfage accommodation at Launceston exceeds 2,000 feet.

(*b*) *Finances.* The following table gives details for the years 1921 to 1925 :—

MARINE BOARD OF LAUNCESTON.—FINANCES, 1921 TO 1925.

Year.	Total Capital Debt.	Capital Debt, Tamar Improvement.	Revenue.	Expenditure.
	£	£	£	£
1921	303,861	256,822	44,421	45,688
1922	318,361	271,322	47,638	40,021
1923	318,361	282,710	49,928	47,588
1924	330,713	283,475	53,672	46,044
1925	329,733	302,494	48,345	47,304

(iii) *Marine Board of Burnie.* The length of the breakwater is 1,250 feet, with a depth up to 42 feet at low water, and a wharf alongside, 630 feet in length by 91 feet wide, with a depth at low water from 24 to 40 feet. There are two other timber wharves, 600 feet and 400 feet long respectively. The receipts for the year ending 30th June, 1925, were £16,295, and the expenditure £17,280, including £11,850 interest on loans.

(iv) *Other Boards and Trusts.* In addition to the three Marine Boards mentioned above, there are four Marine Boards and three Harbour Trusts, which have control of the smaller ports and harbours.

(v) *Financial Summary.* The total receipts and expenditure of the ten marine Boards and Harbour Trusts for the years 1920 to 1924–25 are shown in the following table :—

MARINE BOARDS AND HARBOUR TRUSTS, TASMANIA.—FINANCIAL SUMMARY, 1920 TO 1924-25.

Year.	Receipts.				Expenditure.
	Taxes, Rents, etc.	Government and Loans.	Other.	Total.	
	£	£	£	£	£
1920	85,845	5,154	83,412	174,411	207,378
1921	109,363	3,867	4,957	118,187	116,358
1922-23(*a*)	143,200	19,023	21,743	183,966	172,485
1923-24	162,801	4,360	72,856	240,017	227,389
1924–25	130,807	2,284	11,560	144,651	134,508

(*a*) Figures for 18 months (except in the case of three trusts), the financial year having been changed.

§ 7. Fire Brigades.

1. **New South Wales.**—(i) *General.* Under the Fire Brigades Act of 1909, a Board of Fire Commissioners consisting of five members was formed, and fire districts were constituted. The cost of maintenance of fire brigades is borne in equal proportions by the Government, the municipalities, and the insurance companies concerned, but the expenditure must be so regulated that the proportion payable by the councils in a fire district shall not exceed the amount obtainable from ¼d. in the £ rate on the unimproved capital value of the district.

(ii) *Sydney Fire District.* (*a*) *Plant, etc.* The Sydney fire district includes the City of Sydney and suburbs, comprising a total area of 242 square miles. On the 31st December, 1925, the Board had under its control in this district 73 stations, 368 permanent men, 252 partially-paid firemen, 3 steam and 75 motor fire engines, 158,453 feet of hose, and 596 telephone fire-alarms. The length of wire used for telephone lines was 1,573 miles.

(*b*) *Finances.* The subjoined table shows the receipts and disbursements of the Board for the past five years in respect of the Sydney Fire District :—

SYDNEY FIRE DISTRICT.—FINANCES, 1921 TO 1925.

Year.	Receipts.						Disbursements.
	From Government.	From Municipalities.	From Fire Insurance Companies.	From Firms.	From other Sources.	Total.	
	£	£	£	£	£	£	£
1921	54,355	54,355	53,820	535	6,457	169,522	163,528
1922	53,979	53,979	53,425	554	4,745	166,682	163,750
1923	58,153	58,153	57,551	602	5,954	180,413	178,585
1924	60,768	60,768	60,183	584	5,401	187,704	186,159
1925	60,768	60,768	60,093	675	5,154	187,458	196,672

2. **Victoria**.—(i) *General.* The Fire Brigades Act of 1915 provides for a Metropolitan Fire Brigades Board, and a Country Fire Brigades Board, each consisting of nine members, with local committees in country districts. The income of each Board is derived in equal proportions from the Treasury, the municipalities, and insurance companies.

(ii) *Metropolitan Fire Brigades Board.* (*a*) *Plant, etc.* On the 30th June, 1925, the Board had under its control 40 stations, 281 permanent men, 155 partially-paid firemen, 69 special-service firemen, 1 motor drawn steam fire engine, 8 petrol motor fire pumps, 57 other petrol motor appliances, 1 steam fire engine, 102,174 feet of hose, and 419 fire-alarm circuits having 1,287 street fire alarms, 1,270 containing telephones ; 1,130 auxiliary boxes and 29 automatic systems in public and other buildings ; 100 circuits to sprinkler installations and 173 sprinkler call transmitting instruments ; 114 combined fire alarm and watchman's clock systems.

(*b*) *Finances.* The following table gives particulars for each year from 1920–21 to 1924–25 inclusive :—

METROPOLITAN FIRE BRIGADES BOARD, VICTORIA.—FINANCES, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
RECEIPTS.					
	£	£	£	£	£
Contributions	117,893	125,685	122,700	131,739	151,322
Receipts for services ..	10,807	21,857	14,028	16,486	20,138
Interest and Sundries ..	11,797	3,926	6,898	9,811	11,642
Total	140,497	151,468	143,626	158,036	183,102
EXPENDITURE.					
Salaries	85,537	87,523	93,033	85,477	100,651
Interest and sinking fund ..	14,100	21,136	10,219	10,821	11,682
Other expenditure ..	41,859	46,198	43,515	59,172	68,880
Total	141,496	154,857	146,767	155,470	181,213

(iii) *Country Fire Brigades Board.* (*a*) *Plant, etc.* At 30th June, 1925, there were 115 municipal councils and 96 insurance companies included in the operations of the Act. The brigades are composed chiefly of volunteers, but in the large centres a few permanent station-keepers and partially-paid firemen are employed. There were 142 registered brigades and 2,516 registered firemen at 30th June, 1925. The equipment included 2 motor pumps, 27 motor tenders, 4 steam fire engines, and numerous manual engines and hose reels.

(*b*) *Revenue and Expenditure.* Revenue and expenditure for the years 1921 to 1925 (30th June) are given below :—

COUNTRY FIRE BRIGADES BOARD, VICTORIA.—REVENUE AND EXPENDITURE, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924 (Six Months to 30th June).	Year ended 30th June, 1925.
	£	£	£	£	£
Revenue	19,995	22,718	22,088	16,907	25,133
Expenditure	20,353	23,122	22,813	16,432	23,684

3. **Queensland.**—(i) *General.* The Act of 1920 made provision for the retention of existing fire districts, and for the constitution of new districts. For each district there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows :—The Treasurer two-sevenths, insurance companies three-sevenths, and local authorities two-sevenths. All volunteer fire brigades must be registered.

(ii) *Fire Brigades Boards.* (*a*) *Plant, etc.* At the end of the year 1924 there were fire brigades in 29 towns, with a total strength of 129 permanent men, 249 partly paid, and 86 voluntary. The plant included 30 motor, 5 steam, and 10 manual fire engines, 59 hose reels, consisting of 18 motor, 5 horse, and 36 hand reels, and 93,157 feet of hose. The total number of call points was 331. The Metropolitan Fire Brigade protects an area of 32 square miles and has a staff of 146 men.

(*b*) *Revenue and Expenditure.* The following table gives details for the years 1920 to 1924 :—

FIRE BRIGADE BOARDS, QUEENSLAND.—REVENUE AND EXPENDITURE, 1920 TO 1924.

Year.	Revenue.				Expenditure.			
	From Government.	From Local Authorities.	From Insurance Companies.	Total.	Salaries and Wages.	Buildings, Repairs, etc.	Plant, Stores, etc.	Total.
	£	£	£	£	£	£	£	£
1920 ..	13,724	13,320	20,330	48,573	28,583	4,499	7,793	56,306
1921 ..	14,637	14,524	22,313	54,685	31,513	3,866	8,856	55,263
1922 ..	14,711	14,996	22,976	53,647	34,340	3,687	8,444	56,071
1923 ..	16,054	15,094	22,455	64,190	35,803	12,336	10,166	64,597
1924 ..	17,140	16,347	24,489	61,212	40,032	3,344	10,081	65,183

4. South Australia.—(i) *General.* The Fire Brigades Act of 1913 and amendments provides for a Board of five members, and the expenses and maintenance of brigades are defrayed as to two-ninths by the Treasury, five-ninths by insurance companies, and two-ninths by the municipalities concerned.

(ii) *Fire Brigades Board.* (*a*) *Plant, etc.* At the end of 1925 there were altogether 24 fire brigade stations. The strength of the brigades consists of 103 permanent firemen and 87 auxiliary firemen. The plant consists of 2 steam fire engines, 5 motor engines, 24 motor hose carriages, 53,950 feet of hose, one 90-ft. turntable escape ladder, 2 telescopic curricle ladders, and 2 fire escapes.

(*b*) *Revenue and Expenditure.* The following table shows the revenue of the Board for the years 1921 to 1925, the expenditure in each year being the same :—

FIRE BRIGADES BOARD, SOUTH AUSTRALIA.—REVENUE, 1921 TO 1925.

Heading.	1921.	1922.	1923.	1924.	1925.
	£	£	£	£	£
Revenue	35,817	37,306	35,071	38,173	47,103

5. Western Australia.—(i) *General.* Under the 1916 Act every municipal or road board district is constituted a fire district under the control of the Western Australian Fire Brigades Board. The income of the Board is derived as to two-eighths from Government, three-eighths from municipalities, and three-eighths from insurance companies.

(ii) *Western Australian Fire Brigades Board.* (*a*) *Plant, etc.* The whole of the brigades throughout the State are now controlled by the Western Australian Fire Brigades Board, and number 40. The staff at the 31st December, 1925, included a chief officer, deputy chief officer, third officer, district officer, motor engineeer, electrical engineer, 8 other officers, 106 permanent, 25 partially-paid, and 485 volunteer firemen. The plant comprised 4 steam, 5 motor and 4 manual engines, 18 motor hose carriages, 37 reels, and 75,200 feet of hose.

(*b*) *Finances.* The following table gives details for the years 1921 to 1925 : —

WESTERN AUSTRALIAN FIRE BRIGADES BOARD.—FINANCES, 1921 TO 1925.

Year ended 31st December—	Revenue.	Expenditure.	Estimated Value.	
			Land and Buildings.	Plant.
	£	£	£	£
1921	40,630	35,511	46,840	26,000
1922	34,833	34,746	46,000	26,000
1923	35,553	35,463	46,000	28,000
1924	38,720	38,621	48,650	28,000
1925	50,341	46,539	60,440	29,590

6. Tasmania.—(i) *General.* The municipal council of any municipality may, under the Act of 1920, petition the Governor to proclaim the municipality or any portion of it to be a fire district, each district to have a Board of five members. The expenses of each Board are borne in equal proportions by contributions from the Treasurer, the municipalities concerned, and insurance companies insuring property within the district.

(ii) *Hobart Fire Brigade Board.* (*a*) *Plant, etc.* At the end of 1925 the staff consisted of 13 permanent and 15 partially-paid firemen. There were at that date also 1 motor pump, 1 extension and 1 curricle ladder, two motor hose carriages, 3 horse and 4 hand reels, 2 Pompier ladders, and 10,750 feet of hose.

(*b*) *Revenue and Expenditure.* The revenue for the years 1924 and 1925 amounted to £6,172 and £6,117 respectively, expenditure being the same.

CHAPTER V.

LAND TENURE AND SETTLEMENT.

§ 1. Introduction.

1. **General.**—A comprehensive description of the land tenure systems of the several States was given in Official Year Book No. 4 (pp. 235 to 333), while later alterations were referred to in subsequent issues. In this chapter a summary is given of the principal features of existing land legislation together with some account of the various tenures under which Crown lands may be taken up at the present time. Special paragraphs are devoted to the settlement of returned soldiers on the land, the tenure of land by aliens, and advances to settlers. Particulars as to the areas of land alienated in each State and similar matter are also included.

2. **State Land Legislation.**—The legislation in force relating to Crown lands, Closer Settlement, Returned Soldiers' Settlement, and other matters dealt with in this chapter is summarized in the following conspectus :—

STATE LAND LEGISLATION.

New South Wales.	Victoria.	Queensland.
	CROWN LANDS ACTS.	
Crown Lands Act 1913–1923 : Western Lands Act 1901–1919 : Crown Lands Purchase Validation Act 1923. Crown Lands Amendment (Disposal) Act 1923. Crown Lands and Closer Settlement (Amending) Act 1924.	Land Act 1915–1923.	Land Act 1910–1924. Upper Burnett and Callide Land Settlement Act 1923. Prickly-pear Land Act 1923. Sugar Workers' Perpetual Lease Selections Act 1923.
	CLOSER SETTLEMENT ACTS.	
Closer Settlement Act 1904–1919 : Closer Settlement Purchases Validation Act 1923.	Closer Settlement Act 1915–1925.	Closer Settlement Act 1906–1923.
	MINING ACTS.	
Mining Act 1906–1924 : Mining Leases (Validation) Act 1924.	Mines Act 1915–1921.	Mining Acts 1898–1920 : Mining for Coal and Mineral Oil Act 1912 : Petroleum Act 1915–1923 : Miners' Homestead Perpetual Leases Act 1913–1921 : Coal Mining Act 1925.
	SOLDIERS' SETTLEMENT ACTS.	
Returned Soldiers' Settlement Act 1916–1922.	Discharged Soldiers' Settlement Act 1917–1924.	Discharged Soldiers' Settlement Act 1917–1920.
	ADVANCES TO SETTLERS ACTS.	
Government Savings Bank Act 1906–1923 : Returned Soldiers' Settlement Act 1916–1922.	State Savings Bank Act 1915–1922 : Primary Products Advances Act 1919–1922 : Closer Settlement Act 1915–1924 : Fruit Act 1915–1920 : Discharged Soldiers' Settlement Act 1917–1924.	State Advances Act 1916 : Co-operative Agricultural Products and Advances to Farmers Act 1914–1919 : Agricultural Bank Act 1923.

3. **Northern Territory Land Legislation.**—In the Northern Territory, the legislation relating to Crown land is embodied in the Crown Lands Ordinance 1924–25, that relating to mining in the Northern Territory Mining Act 1903, the Gold Dredging Act 1899, the Tin Dredging Ordinance 1911–1920, and the Mineral Oil and Coal Ordinance 1922–1923; and that relating to Advances to Settlers in the Advances to Settlers Act 1923, and the Encouragement of Primary Production Ordinance 1924–26.

4. **Federal Capital Territory Land Legislation.**—In the Federal Capital Territory, the Ordinances relating to Crown lands are the Leases Ordinance 1918–1923, the Recreation Land Leases Ordinance 1923, the City Area Leases Ordinance 1925, the Church Lands Leases Ordinance 1924, and the Leases (Special Purposes) Ordinance 1925.

STATE LAND LEGISLATION—*continued.*

South Australia.	Western Australia.	Tasmania.
	CROWN LANDS ACTS.	
Crown Lands Act 1915–1919: Pastoral Act 1904–1925.	Land Act 1898–1925.	Crown Lands Act 1911–1924.
	CLOSER SETTLEMENT ACTS.	
Crown Lands Act 1915–1919.	Agricultural Lands Purchase Act 1909–1922.	Closer Settlement Act 1913–1924.
	MINING ACTS.	
Mining Act 1893–1922: Gold Dredging Act 1905: Mining on Private Property Act 1909–1916.	Mining Act 1904–1923: Sluicing and Dredging for Gold Act 1899.	Mining Act 1917–1924: Aid to Mining Act 1924.
	RETURNED SOLDIERS' SETTLEMENT ACTS.	
Discharged Soldiers' Settlement Act 1917–1925.	Discharged Soldiers' Settlement Act 1918–1919.	Returned Soldiers' Settlement Act 1916–1923.
	ADVANCES TO SETTLERS ACTS.	
Irrigation Act 1922–1925: Pastoral Act 1904–1925: Discharged Soldiers' Settlement Act 1917–1925.	Agricultural Bank Act 1906–1924.	State Advances Act 1907–1923: Advances to Fruit-growers Act 1918–1921: Closer Settlement Act 1913–1924: Returned Soldiers' Settlement Act 1916–1923.

5. Administration and Classification of Crown Lands.—In each of the States there is a Lands Department under the direction of a responsible Cabinet Minister who is charged generally with the administration of the Acts relating to the alienation, occupation and management of Crown lands. The administrative functions of most of the Lands Departments are to some extent decentralized by the division of the States into what are usually termed Land Districts, in each of which there is a Lands Office, under the management of a lands officer, who deals with applications for selections and other matters generally appertaining to the administration of the Acts within the particular district. In some of the States there is also a local Land Board or a Commissioner for each district or group of districts. In the Northern Territory a Land Board, under the control of the Minister for Home and Territories, is charged with the general administration of the Lands Ordinance and of Crown lands in the Northern Territory. In the Federal Capital Territory the administration of the Leases Ordinances is in the hands of the Federal Capital Commission.

Crown lands are generally classified according to their situation, the suitability of the soil for particular purposes, and the prevailing climatic and other conditions. The modes of tenure under the Acts, therefore, as well as the amount of purchase money or rent, and the conditions as to improvements and residence, vary considerably. The administration of special Acts relating to Crown lands is in some cases in the hands of a Board under the general supervision of the Minister, e.g., the Western Lands Board in New South Wales, the Lands Purchase and Management Board in Victoria, and the Closer Settlement Board in Tasmania.

In each of the States and in the Northern Territory there is also a Mines Department, which is empowered under the several Acts relating to mining to grant leases and licences of Crown Lands for mining and auxiliary purposes.

6. Classification of Tenures.—The tabular statement which follows shows the several tenures under which Crown lands may be acquired or occupied in each State. In the Northern Territory perpetual leases of pastoral and agricultural land are granted, as well as miscellaneous leases, and grazing and occupation licences. The mining leases and holdings are, generally speaking, similar to those of the States. In the Federal Capital Territory only city leases and leases of other lands are issued.

STATE CROWN LANDS—TENURES.

New South Wales.	Victoria.	Queensland.
FREE GRANTS, RESERVATIONS AND DEDICATIONS.		
Free Grants : Reservations.	Free Grants : Reservations.	Free Grants : Reservations.
UNCONDITIONAL PURCHASE OF FREEHOLD.		
Auction Sales : After-auction Purchases : Special Purchases : Improvement Purchases : Purchases of Town Leases : Suburban Holdings : Returned Soldiers' Special Holdings : Residential Leases : Week-end Leases.	Auction Sales.	

STATE CROWN LANDS—TENURES—*continued.*

New South Wales.	Victoria.	Queensland.
ACQUISITION OF FREEHOLD BY WAY OF CONDITIONAL PURCHASE.		
Residential Conditional Purchases : Non-residential Conditional Purchases : Additional Conditional Purchases : Conversions into Conditional Purchases.	Residential Selection Purchase Leases : Non-residential Selection Purchase Leases : Licences of Auriferous worked-out Lands : Conditional Purchase Leases of Swamp or Reclaimed Lands : Selection Purchase Leases of Mallee Lands : Murray River Settlements : Special Settlement Areas : Conversions into Selection Purchase Leases.	
LEASES AND LICENCES UNDER LAND ACTS.		
Conditional Leases : Conditional Purchase Leases : Special Conditional Purchase Leases : Homestead Selections : Homestead Farms : Settlement Leases : Special Leases : Annual Leases : Scrub Leases : Snow Leases : Inferior Lands Leases : Crown Leases : Improvement Leases : Occupation Licences : Leases of Town Lands : Suburban Holdings : Week-end Leases : Residential Leases : Leases in Irrigation Areas : Western Lands Leases : Forest Leases : Forest Permits.	Perpetual Leases : Auriferous Lands Licences : Leases of Swamp or Reclaimed Lands : Perpetual Leases of Swamp or Reclaimed Lands : Grazing Licences : Perpetual Mallee Leases : Miscellaneous Leases and Licences : Bee Farm Licences : Bee Range Area Licences : Eucalyptus Oil Licences : Forest Leases : Forest Licences : Forest Townships.	Perpetual Lease Selections : Perpetual Lease Prickly-pear Selections : Pastoral Leases : Preferential Pastoral Leases : Prickly-pear Leases : Occupation Licences : Special Leases : Grazing Selections : Auction Perpetual Leases.
CLOSER SETTLEMENT.		
Sales by Auction : After-auction Sales : Closer Settlement Purchases : Permissive Occupancies : Closer Settlement Promotion.	Sales of Land : Conditional Purchase Leases : Conditional Purchase Leases in Mountainous Areas.	Perpetual Lease Selections : Settlement Farm Leases : Perpetual Town, Suburban and Country Leases.
LEASES AND LICENCES UNDER MINING ACTS.		
Holdings under Miners' Rights : Gold Mining Leases : Mineral Leases : Coal and Oil Mining Leases : Business Licences : Residence Areas.	Holdings under Miners' Rights : Gold Mining Leases : Mineral Leases : Business Areas : Residence Areas.	Holdings under Miners' Rights : Permits to Prospect for Petroleum : Petroleum Leases : Licences to Prospect for Coal and Mineral Oil : Gold Mining Leases : Mineral Leases : Business Areas : Residence Areas : Miners' Homestead Perpetual Leases.
SETTLEMENT OF DISCHARGED SOLDIERS AND SAILORS.		
Returned Soldiers' Special Holding Purchases : Returned Soldiers' Group Purchases : Returned Soldiers' Special Holding Leases.	(Same Tenures as under the Land and Closer Settlement Acts.)	Perpetual Lease Selections : Perpetual Town and Suburban Leases.

STATE CROWN LANDS—TENURES—*continued.*

South Australia.	Western Australia.	Tasmania.
FREE GRANTS, RESERVATIONS, AND DEDICATIONS.		
Free Grants : Reservations.	Free Grants : Reservations.	Free Grants : Reservations.
UNCONDITIONAL PURCHASE OF FREEHOLD.		
Auction Sales.	Auction Sales.	Auction Sales : After-auction Sales : Sales of Land in Mining Towns.
ACQUISITION OF FREEHOLD BY WAY OF CONDITIONAL PURCHASE.		
Agreements to Purchase: Special Agreements to Purchase (40 years' term) : Homestead Blocks.	Conditional Purchases with Residence : Conditional Purchases without Residence : Conditional Purchases by Direct Payment : Conditional Purchases of Land for Vineyards, etc. : Conditional Purchases of Inferior Lands : Conditional Purchases by Pastoral Lessees : Conditional Purchases of Grazing Lands : Homestead Farms : Village Allotments : Workingmen's Blocks : Special Settlement Leases.	Selections for Purchase : Additional Selections for Purchase : Homestead Areas : Selections in Mining Areas : Sales by Auction : Sales by Private Contract : After-auction Sales : Special Settlement Areas.
LEASES AND LICENCES UNDER LAND ACTS.		
Perpetual Leases : Special Perpetual Leases (Free Period) : Perpetual Leases of Homestead Blocks : Miscellaneous Leases : Grazing and Cultivation Leases : Licences : Licences of Resumed Land : Pastoral Leases : Leases to Discoverers of Pastoral Country : Speçial Leases to Discoverers of Water : Irrigation Blocks : Town Allotments in Irrigation Areas : Forest Leases.	Pastoral Leases : Special Leases : Residential Leases : Leases of Town and Suburban Lands : Irrigation Leases : Forest Leases.	Grazing Leases : Pastoral Leases: Leases of Land covered with Button Grass, etc. : Leases of Mountainous Land : Miscellaneous Leases : Temporary Licences : Occupation Licences: Residence Licences : Business Licences : Forest Leases, Licences and Permits.
CLOSER SETTLEMENT.		
Sales by Auction : Agreements to Purchase : Miscellaneous Leases.	Conditional Purchases : Town and Suburban Areas.	Leases with Right of Purchase : Special Sales.
LEASES AND LICENCES UNDER MINING ACTS.		
Holdings under Miners' Rights : Search Licences : Occupation Licences : Gold Leases : Mineral Leases : Business Areas : Residence Areas.	Holdings under Miners' Rights : Gold Mining Leases : Mineral Leases : Business Areas : Residence Areas : Miners' Homestead Leases.	Holdings under Miners' Rights : Prospectors' Licences : Gold Mining Leases : Mineral Leases.
SETTLEMENT OF DISCHARGED SOLDIERS AND SAILORS.		
Perpetual Leases : Pastoral Leases : Agreements to Purchase.	Ordinary Tenure : Special Tenure.	Free Grants : Ordinary Tenure : Special Tenure.

§ 2. Free Grants, Reservations, and Dedications.

1. New South Wales.—(i) *Free Grants.* Crown lands may, by notification in the *Gazette*, be dedicated for public purposes and be granted therefor in fee-simple. Such lands may be placed under the care and management of trustees, not less than three in number, appointed by the Minister.

(ii) *Reservations.* Temporary reservations of Crown lands from sale or lease may be made by the Minister.

(iii) *Areas Granted and Reserved.* During the year 1924–25, the total area for which free grants were prepared was 1,749 acres, including grants of 1,741 acres of land resumed under the 12th clause of the Public Roads Act 1902. During the same period 2,370 acres were dedicated and permanently reserved, the number of separate dedications being 125.

On the 30th June, 1925, the total area reserved, including temporary reserves, was 18,815,641 acres, of which 5,373,247 acres were for travelling stock, 2,962,036 acres for forest reserves, 743,368 acres for water, 1,369,088 acres for mining, and the remainder for temporary commons, railways, recreation reserves and parks, reserves for aborigines, and miscellaneous purposes.

2. Victoria.—(i) *Free Grants.* The Governor may grant, convey or otherwise dispose of Crown lands for public purposes.

(ii) *Reservations.* The Governor may temporarily or permanently reserve from sale, lease or licence any Crown lands required for public purposes, and may except any area of Crown lands from occupation for mining purposes or for residence or business under any miner's right or business licence.

(iii) *Areas Granted and Reserved.* During the year 1924, 24 acres were granted without purchase, and reservations of both a permanent and temporary nature, comprising a net area of 17,015 acres, were made. At the end of 1924, the total area reserved was 7,549,076 acres, consisting of roads, 1,794,218 acres; water reserves, 313,551 acres; agricultural colleges, etc., 85,590 acres; permanent forests and timber reserves under Forests Act, 4,305,588 acres; forests and timber reserves under Land Acts, 329,600 acres; reserves in the Mallee, 403,258 acres; and other reserves, 317,271 acres.

3. Queensland.—(i) *Free Grants.* The Governor may grant in trust any Crown land, which is or may be required for public purposes. Under the Irrigation Act land to be used for the purpose of any undertaking under that Act may be vested in fee-simple in the Irrigation Commission.

(ii) *Reservations.* The Governor may reserve from sale or lease, either temporarily or permanently, any Crown land which is or may be required for public purposes. Reserved lands may be placed under the control of trustees who are empowered to lease the same for not more than 21 years with the approval of the Minister.

Under the State Forests and National Parks Act, the Governor may permanently reserve any Crown lands and declare them to be a State Forest or a National Park.

(iii) *Areas Granted and Reserved.* During the year 1925, 18 free grants were issued, the total area thereof being 162 acres. During the same period the area of reserves cancelled was 352,859 acres less than the area set apart as reserves. The total area reserved up to the end of 1925 was 17,592,188 acres, made up as follows:—timber reserves, 3,320,886 acres; State forests and national parks, 1,935,479 acres; for use of aborigines, 6,097,838 acres; and general, 6,237,985 acres.

4. South Australia.—(i) *Free Grants.* The Governor may dedicate Crown lands for any public purpose and grant the fee-simple of such lands, with the exception of foreshores and land for quays, wharves or landing-places, which are inalienable in fee-simple from the Crown.

(ii) *Reservations.* The Governor may reserve Crown lands for (*a*) the use and benefit of aborigines, (*b*) military defence, (*c*) forest reserves, (*d*) railway stations, (*e*) park lands, or (*f*) any other purpose that he may think fit.

(iii) *Areas Granted and Reserved.* During the year 1925 free grants were issued for a total area of 17 acres. During the same year reserves comprising 10,825 acres were proclaimed. At the end of 1925 the total area reserved was 16,297,486 acres.

5. **Western Australia.**—(i) *Free Grants.* The Governor may dispose of, in such manner as for the public interest may seem best, any lands vested in the Crown for public purposes, and may grant the fee-simple of any reserve to secure the use thereof for the purpose for which such reserve was made.

(ii) *Reservations.* The Governor may reserve any lands vested in the Crown for public purposes. Areas not immediately required may be leased from year to year. Reserves may be placed under the control of a local authority or trustees, with power to lease them for a period not exceeding 21 years, or may be leased for 99 years. Temporary reserves may also be proclaimed.

(iii) *Areas Granted or Reserved.* During the year 1925, a few small areas of land were granted in fee-simple, and 113,888 acres were reserved for various purposes.

6. **Tasmania.**—(i) *Free Grants.* The only mention in the Crown Lands Act respecting free grants of land is that the Governor may agree with the Governor-General of the Commonwealth for the grant of any Crown land to the Commonwealth, and it is expressly stated that no lands may be disposed of as sites for religious purposes except by way of sale under the Act. Under the Returned Soldiers Settlement Act of 1916, returned soldiers who applied prior to 31st March, 1922, are eligible to receive free grants of Crown land not exceeding £100 each in value, but these grants are conditional on the land being adequately improved.

(ii) *Reservations.* The Governor in Council may except from sale or lease, and reserve to His Majesty any Crown land for public purposes, and vest for such term as he thinks fit any land so reserved in any person or corporate body. Any breach or non-fulfilment of the conditions upon which such land is reserved renders it liable to forfeiture. A school allotment, not exceeding 5 acres in area, may also be reserved.

(iii) *Areas Granted or Reserved.* During the year ended 31st December, 1924, the area granted free was 5,146 acres, nearly all of which was granted to soldiers under the Returned Soldiers' Settlement Act, while during the same year, 7 free leases were issued to local public bodies for municipal purposes, and 8,968 acres were reserved, of which 8,890 acres were reserved for a forest reserve, 59 acres for recreation purposes, 3 acres for a gravel reserve, 7 acres for a hospital reserve, 2 acres for hall site purposes, 4 acres for cemetery purposes, and 3 acres for municipal purposes. The total area reserved to the end of 1924 was 5,004,301 acres.

7. **Northern Territory.**—(i) *Reservations.* The Governor-General may resume for public purposes any Crown lands, not subject to any right of or contract for purchase, and may reserve, for the purpose for which they are resumed, the whole or any portion of the land so resumed.

(ii) *Areas Reserved.* The area of land held under reserve at the end of 1924 was 38,235 square miles.

§ 3. Unconditional Purchases of Freehold.

1. **New South Wales.**—(i) *Auction Purchases.* Crown lands, not exceeding in the aggregate 200,000 acres in any one year, may be sold by public auction in areas not exceeding half-an-acre for town lands, 20 acres for suburban lands, and 640 acres for country lands, at the minimum upset price of £8, £2 10s., and 15s. per acre respectively. At least 10 per cent. of the purchase-money must be paid at the time of sale, and the balance within 3 months, or the Minister may allow the payment of such balance to be deferred for a period not exceeding 10 years, 5 per cent. interest being added. Town blocks in irrigation areas may also be sold by auction.

(ii) *After-auction Purchases.* In certain cases, land offered at auction and not sold may be purchased at the upset price, but one-quarter of the purchase-money must be paid as deposit with the application, and the balance as notified in the *Gazette.* Any such application is, however, subject to the approval of the Minister.

(iii) *Special Purchases.* Under certain circumstances, land may be sold in fee-simple, the purchaser paying the cost of survey and of reports thereon, in addition to the purchase-money. The minimum upset price per acre is the same as in the case of land sold by auction.

(iv) *Improvement Purchases.* The owner of improvements in authorized occupation by residence under any Mining or Western Lands Act of land within a gold field or mineral field may purchase such land without competition at a price determined by the local land board, but at not less than £8 per acre for town lands or £2 10s. per acre for other lands. The area must not exceed ¼ acre within a town or village, or 2 acres elsewhere, and no person may purchase more than one such area within 3 miles of a similar prior purchase by him.

(v) *Purchases of Residential Leases.* A holder of a residential lease (including any additional residential leases) may, after the expiration of the first 5 years of his lease, apply to purchase the land held thereunder. The local land board fixes the price and reports to the Minister, who may either grant or refuse the application. No person may hold more than one such purchase.

(vi) *Purchases of Week-end Leases and Town Lands Leases.* The holder of a week-end lease or of a town lands lease may apply to purchase the land comprised therein, and the Minister may either grant or refuse such application. The price is the capital value of the land at the date of application and is determined by the local land board. The purchase money must be paid within 3 months, or within such further period as the Minister may determine, interest being chargeable at 5 per cent. per annum.

(vii) *Purchases of Suburban Holdings.* The land contained within a suburban holding may, with the consent of the Minister, be purchased by the holder thereof, on payment of the purchase-money in ten equal annual instalments with 2½ per cent. interest. The value of the land, exclusive of the improvements effected by the holder, is fixed by the local land board, and the purchase is subject to a condition of residence on the land for 5 years from the date of taking up the suburban holding. No transfer of land so purchased may be made without the consent of the Minister.

(viii) *Areas Sold by Auction and Special Purchases, exclusive of Town Blocks within Irrigation Areas.* During the year ended 30th June, 1925, the total area sold was 5,292 acres, of which 3,362 acres were sold by auction and 483 acres as after-auction purchases, while 39 acres were sold as improvement purchases and 1,408 acres as special purchases. The amount realized for the sale of the whole area was £52,857.

2. **Victoria.**—(i) *General.* Lands specially classed for sale by auction may be sold by auction in fee-simple, not exceeding 100,000 acres in any one year, at an upset price of £1 an acre, or at any higher price determined. The purchaser must pay the survey-fee at the time of the sale, together with a deposit of 12½ per cent. of the whole price; the residue is payable in equal half-yearly instalments with interest. Any unsold land in a city, town or borough, areas specially classed for sale, isolated pieces of land not exceeding 50 acres in area, and sites for churches or charitable purposes, if not more than 3 acres in extent, may be sold by auction on the same terms. Swamp or reclaimed lands may also be sold by auction, subject to the condition that the owner keeps open all drains, etc., thereon.

(ii) *Areas Sold at Auction and by Special Sales.* During the year 1924, a total of 1,969 acres was disposed of under this tenure, 1,444 acres being country lands, while 525 acres of town and suburban lands were sold by auction.

3. **Queensland.**—Since the end of 1916, land, not already conditionally acquired, cannot be alienated to selectors in fee-simple.

4. South Australia.—(i) *Sales by Auction.* The following lands may be sold by auction for cash :—(*a*) special blocks, (*b*) Crown lands which have been offered for lease and not taken up within 2 years, (*c*) town lands, and (*d*) suburban lands, which the Governor excepts from the operations of the Land Board. A purchaser must pay 20 per cent. of the purchase-money in cash, and the balance within one month or within such extended time as the Commissioner of Crown Lands may allow. Town lands may be sold subject to the condition that they cannot be transferred or mortgaged for 6 years.

(ii) *Areas Sold, etc.* During the year ended 30th June, 1925, the area of town lands sold by auction was 73 acres. In addition, 29,173 acres were sold at fixed prices, and the purchases of 80,676 acres on credit were completed, making a total of 109,922 acres.

5. Western Australia.—(i) *Sales by Auction.* Town, suburban, and village lands, after being surveyed into lots and notified in the *Gazette*, must be sold by auction. Ten per cent. of the purchase money must be paid in cash, together with the value of any improvements, and the balance in four equal quarterly instalments. Suburban land must be fenced within 2 years, and, until that is effected, no Crown grant may be issued.

(ii) *Areas Sold.* During the year ended 30th June, 1925, the area of town and suburban allotments sold was 2,209 acres in 908 allotments.

6. Tasmania.—(i) *Sales by Auction.* Town lands may be sold by auction for cash or on credit, no conditions being imposed beyond the payment of the purchase-money. No town land, the price of which is less than £15, may be sold on credit.

(ii) *After-auction Sales.* Town lands, not within 5 miles of any city, which, after having been offered at auction, have not been sold, may be sold at the upset prices by private contract.

(iii) *Sales of Land in Mining Towns.* Any town land in a mining area may be sold by auction for cash, provided that any person, being the holder of a residence licence or business licence in lawful occupation of a residence area or business area and the owner of permanent improvements of a value equal to or greater than the upset price, is entitled to purchase such area at the upset price, prior to the sale by auction. The upset price of the unimproved value must not be less than £10 and the area must not exceed ½ acre.

(iv) *Areas Sold.* During the year 1924 the area sold by auction or by special sale amounted to 2,747 acres, as against 362 acres for the previous year.

§ 4. Acquisition of Freehold by way of Conditional Purchase.

1. New South Wales.—(i) *Residential Conditional Purchases.* Crown lands, not within certain areas, and not leased or reserved, are open to conditional purchase at the price of 20s. per acre, unless gazetted at a different rate. The maximum area which may be conditionally purchased is 1,280 acres in the Eastern Division, and 2,560 acres in the Central Division, and the minimum area is 40 acres. In a special area, the areas are such as are gazetted. These areas may, however, be exceeded in certain circumstances by additional holdings out of areas set apart for the purpose in order to make up a home-maintenance area. Every application must be accompanied by a deposit of 5 per cent. of the price of the land, together with the amount of survey fee or an instalment thereof and the necessary stamp duty. The balance of the purchase-money, with 2½ per cent. added, is payable in annual instalments of 5 per cent. of the price of the land, or of ninepence in the pound of the full purchase money, the first instalment being payable at the end of the third year from the date of application. The following conditions are attached to the holding :—(*a*) the holder must reside thereon for 5 years, (*b*) the boundaries must be fenced within 3 years after the confirmation of the application, and such fence must be maintained for a period of 5 years from such confirmation ; or, alternatively, (*c*) improvements must be made within 3 years to the value of not less than 6s. per acre, and within 5 years 10s. per acre, but the value of such improvements need not exceed £384 or 30 per cent. of the value of the land within 3 years, and £640 or 50 per cent. within 5 years. A Crown grant in fee-simple is issued when all the conditions have been complied with, and the balance of the purchase-money and stamp duty and deed fee have been paid.

(ii) *Non-residential Conditional Purchases.* Crown lands which are open to ordinary conditional purchase may be conditionally purchased without the condition of residence subject to the following conditions:—(*a*) the area must not exceed 320 acres, (*b*) the applicant must be not less than 21 years of age, (*c*) no person, without the consent of the Minister, may make a subsequent purchase, except as an additional conditional purchase which, together with the original purchase, must not exceed 320 acres, (*d*) the price is double that payable for the same land as a residential purchase, and the deposit is 2s. for each pound of purchase money, the balance of which, with 2½ per cent. interest added, is payable after the third year in annual instalments of 2s. per pound or of 9d. in the pound of the full purchase-money, and (*e*) the boundaries must be fenced within 12 months and not less than £1 per acre expended within 5 years on other permanent improvements. Fencing may be dispensed with, subject to other approved improvements being effected to the value of 30s. per acre within 5 years after confirmation of the application.

(iii) *Additional Conditional Purchases.* An applicant or holder of an original conditional purchase or a holder of a freehold (not in the Western Division) containing not less than 40 acres, and which does not constitute a home maintenance area, may, subject to certain conditions, apply for an additional conditional purchase, but the whole area contained in the original purchase or freehold and in the additional purchase together must not exceed that allowed for an ordinary conditional purchase. An additional conditional purchase is subject to the same conditions as an original holding.

(iv) *Conversions of Leases into Conditional Purchases, etc.* (*a*) The holder of a conditional lease may convert the whole or part of the land comprised therein into an additional conditional purchase.

(*b*) A conditional purchase lease may be converted into a conditional purchase on payment of 5 per cent. deposit on the capital value of the land and the balance in equal annual instalments of 5 per cent. of the purchase-money with interest at 2½ per cent. Such conditional purchase is subject to all the unfulfilled conditions of the lease, except that of the payment of rent.

(*c*) A non-residential conditional purchase may be converted into an ordinary conditional purchase, and residence must commence within three months of such conversion, the period of residence being reduced by the period resided, if any, under the former holding.

(*d*) The holder of a special lease or of an agricultural or pastoral lease granted under the Church and School Lands Dedication Act may, under certain conditions, apply to convert his holding into a conditional purchase or an additional conditional purchase. The period of residence is reduced by the period of continuous residence under the former holding.

(*e*) A homestead selection or homestead farm may be converted into a conditional purchase or conditional purchase and conditional lease subject to any special provisions attached to the original holding, and to the general provisions respecting conditional purchases and conditional leases. The conversion is subject to confirmation by the local land board, and the holder is required to pay the cost of any necessary survey or subdivision. The term of residence commences from the date of confirmation, and is reduced by the period of continuous residence on the original holding. The deposit and payment of purchase-money are the same as in the conversion of a conditional purchase lease (see (*b*)).

(*f*) The holder of a Crown lease (unless debarred by notification setting the land apart) or of a settlement lease may convert such lease into a conditional purchase or conditional purchase and conditional lease, provided that the total area held by the applicant and his wife does not exceed that of a home maintenance area. Where such area is in excess of a home maintenance area, the non-convertible part may be held as a conditional lease. The conversion is subject to confirmation by the local Land Board, and the holder is required to pay the cost of any necessary survey or subdivision. The terms of payment and conditions are the same as in the case of conversion of a conditional purchase lease (see (*b*) above).

(v) *Areas Alienated as Conditional Purchases.* At the 30th June, 1925, the total number of conditional purchases in existence was 69,654, covering an area of 18,156,194 acres. The following table gives particulars of conditional purchases from 1920–21 to 1924–25, together with the total area for which deeds had been issued up to the end of the year 1924–25 :—

CONDITIONAL PURCHASES, NEW SOUTH WALES, 1920–21 TO 1924–25.

Year ended 30th June—	Applications made.(*a*)		Applications Confirmed.(*a*)		Areas for which Deeds have been Issued.	
	Number.	Area.	Number.	Area.	During the Year.	To end of Year.
		Acres.		Acres.	Acres.	Acres.
1921	533	90,573	480	78,461	664,522	19,228,810
1922	311	59,878	424	70,233	741,263	19,970,073
1923	361	69,524	200	34,453	667,073	20,637,146
1924	379	70,784	291	41,117	596,124	21,233,270
1925	423	68,496	344	42,123	590,220	21,823,490

(*a*) Exclusive of conversions from other tenures.

2. **Victoria.**—(i) *Residential Selection Purchase Leases.* A person may select from land notified in the *Gazette* as available, a selection purchase lease, the maximum area of which ranges from 200 acres of first-class land to 2,000 acres of Class 4A land. The annual rental varies from 1s. per acre in the case of first-class land to 2⅖d. in the case of Class 4A land, for a period of 20 years, or half those rates for 40 years. Certain specified conditions must be complied with and improvements effected during the first 6 years, and the selector is required to reside on the property for 5 years and may not transfer the same during the first 6 years. At any time after the expiration of 6 years, provided that all the conditions have been fulfilled, and the balance of the purchase money has been paid, a Crown grant may be obtained.

(ii) *Non-residential Selection Purchase Leases.* These leases are similar to the preceding with the exceptions that (*a*) the provision for payment during 40 years is omitted, (*b*) there is no residential condition, and (c) the value of the improvements to be effected is double that of those on a residential lease.

(iii) *Licences of Worked-out Auriferous Lands.* A person may obtain a licence to occupy an allotment of not more than 5 acres of worked-out auriferous lands for a period not exceeding 7 years and to a depth of not more than 50 feet, at a rental of not less than 1s. per acre per annum. Such licences contain conditions prescribed by the Governor. If the licensee has complied with all the conditions of his licence for a period of 7 years he is entitled to a Crown grant on payment of the purchase-money which is fixed by the Board of Land and Works at not less than £1 per acre, from which is deducted the amount paid in licence fees.

(iv) *Conditional Purchase Leases of Swamp or Reclaimed Lands.* A conditional purchase lease of swamp or reclaimed lands covers such term as may be agreed upon between the lessee and the Board of Land and Works, and provides for the payment of the value of the allotment with interest at the rate of 4½ per cent., by 63 half-yearly instalments. The lessee must keep open all drains, etc., and make improvements to the value of 10s. per acre in each of the first 3 years, but need not reside on the land.

(v) *Selection Purchase Leases of Mallee Lands.* The terms and conditions attached to these leases are the same as those attached to ordinary selection purchase leases, but the areas may be larger, ranging from 640 acres of first-class land to 4,000 acres of Class 4A land. The lessee must also, within 2 years, clear and cultivate at least one-fourth of his holding, and make provision for the storage of water.

(vi) *Murray River Settlements.* Crown lands near the River Murray may be subdivided into allotments not exceeding 50 acres each and taken up as conditional purchase leases. The value of the land is payable in 63 half-yearly instalments with not less than 4½ per cent. interest. Residential and improvement conditions are laid down, and after 12 years, if they have been complied with, a Crown grant may be obtained.

(vii) *Special Settlement Areas.* Crown land, upon which expenditure has been made by the Crown, may be set apart as a special settlement area, and surveyed into allotments not exceeding 200 acres each. Such allotments may be taken up as conditional purchase leases, but every Crown grant contains a condition that the land shall at all times be maintained and used for the purpose of agriculture, and the holder must reside thereon.

(viii) *Conversion of Perpetual Leases into Selection Purchase Leases.* A perpetual lease may, with the consent of the Board of Land and Works, be surrendered by the lessee, and a selection purchase lease (residential or non-residential) obtained in lieu thereof.

(ix) *Conversion of Auriferous Lands Licences into Selection Purchase Leases.* If the Minister of Mines consents, the Board may grant to the licensee of an auriferous lands licence a selection purchase lease in lieu thereof, provided that the land is improved to the value of £1 per acre and the occupation is *bona fide.*

(x) *Areas Purchased Conditionally.* The subjoined table gives particulars of the areas selected conditionally from 1920 to 1924:—

AREAS PURCHASED CONDITIONALLY, VICTORIA, 1920 TO 1924.

(EXCLUSIVE OF SELECTION IN THE MALLEE COUNTRY.)

Particulars.	1920.	1921.	1922.	1923.	1924.
	Acres.	Acres.	Acres.	Acres.	Acres.
With residence	79,461	72,752	133,083	122,614	95,998
Without residence ..	23,050	26,767	53,603	77,903	61,965
Total	102,511	99,519	186,686	200,517	157,963
No. of selectors	710	431	741	791	552

3. **Queensland.**—The granting of freehold tenure having been abolished at the end of 1916, only those lands which are held under any form of conditional purchase tenure granted before the beginning of 1917 can be converted into freehold. Land cannot be taken up under any form of conditional purchase.

4. **South Australia.**—(i) *Agreements to Purchase.* Crown lands (except town lands) which have been surveyed or of which the boundaries have been delineated in the public maps, may be offered on agreement to purchase. The area which is to be cleared and rendered available for cultivation, and the payments to be made, are notified in the *Gazette.* An application must be accompanied by a deposit of an amount equal to the first half-yearly instalment of purchase money. The whole purchase money is payable in 60 equal half-yearly instalments of not less than 2 per cent. thereof. Preference is given in allotting land to the applicant who agrees to reside on the land for 9 months in each year. If no application is made within 3 months from the date of notification, the Commissioner may offer the land at a reduced price. No agreement may be granted to any person in the case of land the unimproved value of which exceeds £5,000, nor in such manner that the purchaser would hold lands under any tenure, except pastoral lease, of which the aggregate unimproved value would exceed that sum, excepting in cases where the land is suitable for pastoral purposes only, under which circumstances no agreement to purchase is granted if the carrying capacity of the unimproved land and of all other lands held by the applicant would exceed 5,000 sheep, or, if outside Goyder's line of rainfall, 10,000 sheep. The purchaser must fence in the land within 5 years and comply with specified conditions respecting improvements, and, after 6 years, if all the conditions have been complied with and the balance of the purchase money paid, may complete the purchase.

(ii) *Special Agreements to Purchase.* Where the Commissioner directs, the following provisions for payment are made:—(*a*) No instalments are payable during the first 4 years; (*b*) from the end of the fourth to the end of the tenth year, each instalment is to be at the rate of 2 per cent. of the value of the land, and is to be regarded as interest only; (*c*) from the end of the tenth year, the interest included in the instalments is at the rate of 4 per cent. on the value of the land; and (*d*) the agreement is for 40 years, and the purchase money is to be paid in 60 half-yearly instalments at the rate of £2 16s. 5d. for every £100 of the purchase money, including interest, the payment of such instalments to commence after the end of the tenth year.

(iii) *Homestead Blocks.* Any Crown lands and any lands which the Commissioner may acquire as suitable for homestead blocks may be surveyed and offered as homestead blocks, provided that the unimproved value of the fee-simple of a block does not exceed £100 and that no block is sold for a sum less than the amount paid therefor by the Government, together with the cost of offering the same. A homestead block may be held under an agreement to purchase, but only by a person gaining his livelihood by his own labour, and the holder must reside thereon for 9 months in each year. Such a block may be protected from encumbrance or seizure, if endorsed by the Commissioner as a "Protected Homestead Block."

(iv) *Lands Allotted.* The following table gives the areas of the lands allotted under Agreements to Purchase, exclusive of lands for Soldier Settlement, during the years 1920–21 to 1924–25. No Homestead Blocks have been allotted during that period.

AGREEMENTS TO PURCHASE, SOUTH AUSTRALIA, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	Acres.	Acres.	Acres.	Acres.	Acres.
Eyre's Peninsula Lands ..	89,052	65,277	50,005	111,456	90,320
Murray Lands	48,625	34,606	36,104	50,745	37,295
Pinnaroo Lands	30,166	15,834	11,886	44,291	27,633
Closer Settlement Lands ..	6,176	25,255	9,096	7,302	6,357
Homestead Lands (repurchased) ..	72	9	12	19	..
Buckleboo Railway Lands ..	..	..	..	5,680	10,614
Other Crown Lands	42,642	6,875	11,619	17,160	8,926
Total	216,733	147,856	118,722	236,653	181,145

5. **Western Australia.**—(i) *General.* Agricultural land is divided into two classes—cultivable and non-cultivable. The maximum area to be held by any one person is 1,000 acres of the former or 5,000 acres of the latter, or the equivalent of cultivable and non-cultivable land.

(ii) *Conditional Purchases with Residence.* Land may be disposed of subject to the following conditions:—(*a*) The price is fixed by the Governor, with a minimum of 3s. 9d. and a maximum (except with special approval) of 15s. per acre, the lease to be from 25 to 30 years; (*b*) the maximum area which one person may hold is 1,000 acres, and the minimum, except in approved cases, 100 acres; (*c*) 7 per cent. of the survey-fee to be paid in the first 5 years of the lease, and the survey-fee with interest and purchase-money to be paid over the balance of the term; (*d*) the lessee must reside on the lease for 6 months in each year for the first 5 years; (*e*) the lessee must expend on prescribed improvements an amount equal to one-fifth of the purchase-money in every 2 years for the first 10 years of his lease, and fence one-half of the holding within 5 years and the whole within 10 years; and (*f*) at any time after 5 years, provided that all conditions have been complied with and the full purchase-money and fee paid, the Crown grant will issue.

(iii) *Conditional Purchases without Residence.* Land may be disposed of without the residence condition, subject to all the other conditions prescribed in the previous sub-section, except that the amount to be expended on improvements must be a sum equal to the amount of purchase-money, with 50 per cent. added thereto.

(iv) *Conditional Purchases by Direct Payment.* Land may also be disposed of without residence conditions, subject to the following :—(*a*) The price is fixed by the Governor, but at not less than 10s. per acre, payable within 12 months or sooner; (*b*) the application must be accompanied by a deposit of 10 per cent. of the purchase money, and, if accepted, a licence is issued for 7 years; (*c*) the balance of the purchase money must be paid in 4 equal quarterly instalments within 12 months; (*d*) the lessee must fence in the whole of the land within 3 years, and must expend 10s. per acre on improvements in 7 years; and (*e*) when all the conditions have been fulfilled, and the full purchase money and fee paid, a Crown grant must be issued.

(v) *Conditional Purchases of Land for Vineyards, Orchards, and Gardens.* The Governor may declare any Crown lands open for selection for vineyards, orchards, and gardens, subject to the following conditions :—(*a*) The price must be not less than 10s. per acre; (*b*) 10 per cent. of the purchase-money must be deposited with the application, and if the latter is accepted, a licence is issued for 3 years; (*c*) the balance of the purchase-money must be paid in half-yearly instalments within 3 years; (*d*) the maximum area held by one person must not exceed 50 acres, and the minimum not less than 5 acres; (*e*) the lessee must within 3 years fence in the whole of the land and plant at least one-tenth thereof with vines or fruit trees or cultivate one-tenth as a vegetable garden; and (*f*) on completion of the conditions, and payment of the purchase-money, a Crown grant must be issued.

(vi) *Conditional Purchases of Inferior Lands.* Land which is classed as inferior and second or third class land may also be sold under the conditions mentioned in previous paragraphs, but the price may be reduced to not less than 3s. 9d. per acre, and that of land infested with poison plant may be reduced in price to not less than 1s. per acre.

(vii) *Conditional Purchases by Pastoral Lessees.* A pastoral lessee in the South-West Division may apply for land within his lease not exceeding one-fifth of the land leased by him under conditional purchase, with residence condition, and may hold a maximum area of 2,000 acres, and a minimum area of 200 acres. Similarly, a pastoral lessee in the Kimberley, North-West, Eastern or Eucla Divisions, who has in his possession at least 10 head of sheep or 1 head of large stock for each 1,000 acres, may apply to purchase an area not exceeding 1 per cent. of the total area held by him, the maximum area which may be so selected being 2,000 acres, and the minimum 500 acres.

(viii) *Conditional Purchases of Grazing Lands.* The Governor may declare lands situated in the South-West, Central or Eucla Divisions, which are unsuitable for agriculture, open for selection under the following conditions :—(*a*) The price must be not less than 3s. 9d. per acre; (*b*) the maximum area which can be held by any one person is 5,000 acres, and the minimum 100 acres; (*c*) on approval of the application, accompanied by a deposit of the first instalment of purchase money, a lease for 25 years is issued; (*d*) the lessee must reside on the lease for 6 months in the first year, and for 9 months in each of the succeeding 4 years; (*e*) the lessee must expend on improvements an amount equal to one-fifth of the purchase-money in every 2 years; and (*f*) when all the conditions have been fulfilled, and the purchase-money and fee paid, a Crown grant must be issued.

(ix) *Homestead Farms.* Crown lands, not within a goldfield, may be made available for free farms, termed "Homestead Farms." Any person, not already the holder of more than 100 acres of freehold land, or land held under special occupation or conditional purchase, is entitled to a homestead farm of not more than 160 acres or less than 10 acres. A fee of £1 must be paid with the application, and an approved applicant receives an occupation certificate for 7 years, and neither the land nor any interest therein of the selector is liable to be taken in execution. A selector must comply with the following conditions :—(*a*) Reside for 6 months in each year on the land for the first 5 years; (*b*) within 2 years expend not less than 4s. per acre on the total area; (*c*) within 5 years expend 10s. per acre; (*d*) within 7 years expend 14s. per acre on improvements and a house; and (*e*) fence one-half within 5 years, and the whole within 7 years. After 7 years a selector is entitled to a Crown grant, provided all conditions are fulfilled, or at any time after 12 months, provided all improvements are made, a Crown grant may be obtained on payment of a sum of 5s. per acre.

(x) *Village Allotments.* In connexion with any land set apart for selection as homestead farms, the Governor may declare any land within 5 miles thereof a village site, and such site may be subdivided into allotments not exceeding in area 1 acre each. Any selector of a homestead farm may select an allotment in such village without payment. As soon as the selector is entitled to a Crown grant of his homestead farm, he may, on payment of £1 and the prescribed fee, obtain a Crown grant of his village allotment.

(xi) *Working Men's Blocks.* Land may be set apart for working men's blocks and subdivided into lots not exceeding ½ acre each on a goldfield, or 5 acres elsewhere. Any person who is not already an owner of land in freehold or on conditional purchase, may obtain a lease under the following conditions :—(*a*) The price must be not less than £1 per acre, payable at the rate of one-tenth of the purchase money annually ; (*b*) one person may hold one allotment only ; (*c*) the application must be accompanied by the first instalment of purchase-money, and, if approved, a lease for 10 years is issued ; (*d*) the lessee must reside on the block for 9 months in each of the first 5 years ; (*e*) the land must be fenced in within 3 years, and improvements, in addition, made within 5 years equal in value to double the purchase-money ; and (*f*) after 5 years a Crown grant must be issued, provided all conditions are complied with and the purchase-money and fee paid.

(xii) *Special Settlement Lands.* Land may be set apart as special settlement lands, and may be cleared, drained, or otherwise improved by the Government, and disposed of under the provisions of any preceding conditional purchase tenures.

(xiii) *Areas Alienated.* The following table shows the number of holdings and the areas conditionally selected for which Crown grants were issued and conditionally alienated during the years ending 30th June, 1921 to 1925. Under the heading "Deferred payments (with residence)" are included conditional purchases of grazing lands.

CONDITIONAL PURCHASES.—WESTERN AUSTRALIA, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
NUMBER OF HOLDINGS.					
	No.	No.	No.	No.	No.
Crown Grants Issued	1,269	1,995	1,553	1,557	2,153
Conditionally Alienated ..	2,220	3,275	2,997	2,889	2,406
AREAS FOR WHICH CROWN GRANTS WERE ISSUED.					
	Acres.	Acres.	Acres.	Acres.	Acres
Free Homestead Farms ..	65,286	112,798	53,506	40,680	38,387
Conditional Purchases	435,387	287,669	272,436	285,635	343,100
AREAS CONDITIONALLY ALIENATED.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Conditional Purchases—					
(i) Deferred Payments (with Residence)	1,460,085	1,635,911	1,619,346	1,693,342	1,462,585
(ii) Deferred Payments (without Residence) ..	131,331	139,602	95,011	46,380	44,487
(iii) Direct Payments (without Residence)	363	721	1,121	3,317	2,606
Free Homestead Farms ..	65,285	78,310	111,202	90,745	73,138
Working Men's Blocks ..	10	38	..	..	..
Total	1,657,074	1,854,582	1,826,680	1,833,784	1,582,816

6. **Tasmania.**—(i) *Selections for Purchase.* Rural land is classified into (*a*) first-class land if its value is £1 an acre or over, (*b*) second-class land if less than £1 but not less than 10s. an acre, and (*c*) third-class land if less than 10s. and not less than 5s. an acre, provided that no Crown land within the area and during the currency of a pastoral lease may be sold at less than 10s. per acre. Any person may select for purchase (*a*) one lot of first-class land not exceeding 200 acres nor less than 15 acres on payment of a small deposit and the balance of the purchase-money in instalments spread over 24 years, provided that he is not the holder upon credit of any first-class land or of any unclassified rural land, for which the whole of the purchase-money has not been paid, or (*b*) at the value per acre fixed by the Surveyor-General, one lot of second-class land not exceeding 300 acres nor less than 30 acres, provided that he is not the holder upon credit of any second-class land for which the whole of the purchase-money has not been paid, or (*c*) at the value per acre fixed by the Surveyor-General, one lot of third-class land not exceeding 600 acres nor less than 60 acres, provided that he is not the holder upon credit of any third-class land for which the whole of the purchase-money has not been paid. The terms of purchase are as follows :—a sum equal to one-third of the price is added thereto by way of premium allowed for credit, and the whole sum is payable by a small deposit in the case of (*a*) or by a deposit of one-fortieth part thereof in the case of (*b*) and (*c*), and the balance in 18 and 14 annual instalments respectively. The following conditions must be observed :—(*a*) a purchaser of first-class land must during 8 consecutive years improve the land to the extent of 2s. 6d. per acre annually, and the land must be occupied for 5 years either by himself, a member of his family, or someone employed by him, and (*b*) on second and third-class land, improvements must be effected during 5 consecutive years to the value of 1s. per acre annually.

(ii) *Additional Selections for Purchase.* Any selector for purchase may make a further selection and purchase under the same terms and conditions, provided that the total area held by him does not exceed the maximum allowed for each class of land.

(iii) *Homestead Areas.* Any person who is not the holder on credit of any land may select and purchase at the price fixed one lot of first-class agricultural land, not exceeding 50 acres nor less than 15 acres. The purchase-money is payable by a deposit at the time of selection, and the balance in 18 years in instalments, but no instalments are payable for the first, second, and third years. The purchaser must occupy the land within 4 years for a period of 5 years, and during that period effect improvements to the value of £1 per acre.

(iv) *Selections in Mining Areas.* Any person may select and purchase in a mining area one lot of first-class land, not exceeding 100 acres, on the condition that 2s. 6d. be expended per acre per annum on improvements for 8 years. The price is fixed by the Surveyor-General. Land within 1 mile of a town may be selected and purchased only in lots of not less than 10 acres nor more than 20 acres. The residence condition is for 3 years, to be commenced within 2 years.

(v) *Sales by Auction.* (*a*) *Town Lands.* Town lands may be sold by auction on credit, in which case one-third of the purchase-money is added thereto as interest. One-fourteenth of the purchase-money so increased must be paid at the time of sale, and the balance in 13 annual instalments. Improvements must be made within 5 years to the value of a sum equal to the purchase-money, otherwise such land and any improvements thereon are liable to be forfeited.

(*b*) *Rural Lands.* Rural lands may be sold by auction for cash or on credit. After survey and before sale such lands must be classified into first class, second class, and third class lands, with the following minimum upset prices—first class, £1 per acre ; second class, 10s. per acre ; and third class, 5s. per acre. Lots of less than 15 acres of first-class land may be sold only for cash. When sold on credit, one-third of the purchase-money is added thereto as interest, and one-fortieth of the whole must be paid as deposit, and the balance in 14 annual instalments. Whether sold for cash or on credit, the same conditions of residence and improvements apply as in the case of land selected for purchase.

(*c*) *Lands within Mining Areas.* Crown land in mining areas, not selected under (iv) above, may be sold by auction for cash or on credit, having been previously surveyed into lots of (*a*) not more than 100 acres nor less than 10 acres of first-class land ; (*b*) not less than 30 acres of second-class land; and (*c*) not less than 50 acres of third-class land. No land within 1 mile of a town may be sold as second-class land. The upset price may not be less than £1 per acre for first-class land, 10s. per acre for second-class, and 5s. per acre for third-class land. The usual conditions as to improvements apply, and first-class land must be occupied for at least 3 years.

(vi) *After-auction Sales.* Town lands, not within 5 miles of a city, rural lands, and lands within a mining area, which have been offered for sale by auction and not sold, may be sold at the upset price by private contract under the same conditions as if sold by auction.

(vii) *Sales by Private Contract.* Where any second-class Crown land, being less than 30 acres in area, and not contiguous to or adjacent to any other Crown land, is so situated as to make it desirable that the same should be sold, it may be sold either on credit privately on the same terms as second-class lands or by public auction. In either case, the ordinary conditions as to the improvements on the land apply.

(viii) *Special Settlement Areas.* The Commissioner of Lands may withdraw from selection any area of rural land not less than 1,000 acres in extent which is first-class land suitable for agriculture, horticulture, or dairy farming, together with adjacent inferior land, and may expend money in improving the same and subdividing it into blocks. Such blocks may be submitted to auction under the ordinary conditions applicable to first-class land, or, without having been so submitted (*a*) may be declared to be open to any person; or (*b*) may be reserved for *bona fide* immigrants to the extent of one block in every six, for purchase by private contract at such price as the Commissioner may think fit, the purchase money being spread over 24 years. The usual conditions as to residence and improvements apply also to these blocks.

(ix) *Areas Conditionally Purchased.* The following table shows the areas alienated absolutely under systems of conditional purchases and sales on credit, also the areas sold conditionally and the applications for conditional purchases received and confirmed during the years 1920 to 1924:—

TASMANIA.—CONDITIONAL PURCHASES, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
	Acres.	Acres.	Acres.	Acres.	Acres.
Completion of Conditional Purchases ..	102,857	76,055	67,759	81,112	69,453
Sold Conditionally—					
Selections for Purchase	32,248	52,455	40,502	20,138	16,760
Homestead Areas	40	50	78	..	..
Auction Sales on Credit ..	2,028	1,400	361	362	2,747
Town and Suburban Allotments ..	733	1,614	550	193	321
Total	35,049	55,519	41,491	20,693	19,828
Applications—					
Received	1,836	966	895	769	1,164
Confirmed	524	498	513	425	304

§ 5. Leases and Licences under Land Acts.

1. New South Wales.—(i) *Conditional Leases.* Any applicant for or holder of a conditional purchase may apply for a conditional lease of Crown lands adjoining his property, provided that the area of the conditional lease does not exceed three times the area of the conditional purchase. The term of the lease is 40 years, but the holder of any such lease subsisting at the commencement of the Crown Lands and Closer Settlement (Amending) Act 1924 may, upon application as prescribed made during the last 5 years of the lease, have the term thereof extended for a period of 20 years divided into two periods of 10 years each. The annual rent is determined by the local land board for three periods of 15, 15 and 10 years respectively, and when such lease is extended to 60 years for the two additional periods of 10 years. Pending determination, the provisional rent is fixed at 2d. per acre. The conditions of residence and improvements are the same as those attached to a conditional purchase (see § 4 (i)) and a conditional lease may be converted into an additional conditional purchase.

(ii) *Conditional Purchase Leases.* A conditional purchase lease may be granted in a classified area set apart for such leases. The areas of the blocks and the capital values are determined by the Minister. The term of a lease is 50 years divided into two periods of 25 years each. The annual rent is 2½ per cent. of the capital value. Five years' residence is necessary, and special conditions must be complied with. A holder of an original conditional purchase lease may apply for an additional conditional purchase lease to be held under the same conditions, provided that no applicant may hold a greater area than would substantially exceed a home-maintenance area. At any time after confirmation a conditional purchase lease may be converted into a conditional purchase or a homestead farm.

(iii) *Special Conditional Purchase Leases.* A special conditional purchase lease together with any additional conditional purchase lease held in virtue thereof must not exceed an area of 320 acres. A deposit of rent at the rate of 6d. per acre must be made at the time of application, and, in addition to the conditions other than residence attached to a conditional purchase lease, the lessee must within 3 years effect improvements to the value of from 10s. to £1 per acre as the Minister may determine. The lease may be converted into a conditional purchase.

(iv) *Homestead Selections.* Conditions in regard to this method of taking up land are set out in Official Year Book No. 18, page 159, but practically no lands are now set apart under this tenure.

(v) *Homestead Farms.* A classified area may be subdivided into farms of such areas as the Minister may determine, the capital value and any special conditions as to improvements, etc., being notified in the *Government Gazette.* Such farms are leased in perpetuity at a rental of 2½ per cent. of the capital value, which, after the expiration of 25 years, is re-appraised every 20 years. Residence is obligatory for 5 years, and the holder may, during the first 5 years, in lieu of paying rent, expend during each year a sum equal to not less than the amount of rent in effecting permanent improvements. The holder of an original homestead farm may, in order to make up a home-maintenance area, apply also for an additional homestead farm under similar conditions. A homestead farm may be converted into a conditional purchase or a conditional purchase and conditional lease, or a conditional purchase lease.

(vi) *Settlement Leases.* Allusion to this method of tenure will be found in Official Year Book No. 18, page 159, but practically no lands are now set apart thereunder.

(vii) *Special Leases.* Special leases may be granted for a period not exceeding 28 years for (*a*) wharves and jetties; (*b*) miscellaneous purposes, including grazing, agriculture and business purposes, up to 320 acres; or (*c*) tramway or irrigation purposes not exceeding 3 chains in width without any limit in length. The rent is determined by the local land board. A special lease may be converted into certain specified tenures.

(viii) *Annual Leases for Pastoral Purposes.* Crown lands may be offered by auction or by tender in areas not exceeding 1,920 acres on annual lease, or may be applied for in the prescribed manner, in which case the rent is fixed by the local land board. An annual lease is renewed by payment of rent in advance, but may be terminated by the

Minister on three months' notice. An annual lease does not exempt the land held thereunder from sale or lease of any kind. The holder of such lease may apply for a lease under improvement conditions, and may be granted a lease of an area sufficient for the maintenance of a home for a period not exceeding 10 years.

(ix) *Scrub Leases.* Crown land wholly or partly covered by scrub or noxious undergrowth, may be leased for a term not exceeding 21 years, or up to 28 years, subject to such conditions as the local land board may make for the purpose of destroying the scrub. The term of the lease is divided into such periods as the Minister may determine, and the rent for the second and subsequent periods is fixed by the local land board. Under certain circumstances a home-maintenance area may be converted into a homestead selection during the last year of the lease.

(x) *Snow Leases.* Land usually covered by snow for a part of each year may be leased by auction or tender in areas not exceeding 10,240 acres for a period up to 14 years, but no person may hold more than one such lease.

(xi) *Inferior Lands Leases.* Leases of land of inferior character or in isolated positions may be granted (subject to the terms notified in the *Gazette*) either by tender or sold by auction, or, if no bid is received at auction, on application at the upset price. A home-maintenance area may be converted into a homestead grant during the last year of the lease.

(xii) *Crown Leases.* Crown leases may be disposed of for agriculture or grazing, or for both, in such blocks and subject to such special conditions as the Minister may determine. The term is for 45 years with a residence condition of five years, which may in certain circumstances be fulfilled elsewhere. The annual rent is 1½ per cent. of the capital value of the land, which is re-appraised every 15 years. The first year's rent may be remitted if permanent improvements to a like value have been effected in addition to those required under the conditions of the lease. During the last 5 years of the lease the holder, unless debarred by notification, may convert an area thereof not exceeding that of a home-maintenance area into a homestead farm. Such lease may be converted into a conditional purchase with or without a conditional lease.

(xiii) *Improvement Leases.* Crown land not in the Western Division and which is not suitable for settlement until improved may be leased subject to the following conditions:—(*a*) the term must not exceed 28 years; (*b*) the area must not exceed 20,480 acres; (*c*) the amount bid at auction, or offered by tender, or the upset rent, is to be the annual rent; (*d*) covenants may be specified for the improvement of the land; and (*e*) during the last year of the lease the holder may apply for a homestead grant of a portion of the leasehold, not exceeding a home-maintenance area, and has a tenant-right in the improvements which he has made.

(xiv) *Occupation Licences.* An occupation licence entitles the licensee to occupy Crown lands for grazing purposes, but the licence is renewable only from year to year, and the fees are liable to re-determination annually.

(xv) *Leases of Town Lands.* Crown lands within the boundaries of any town may be leased by auction or tender, such lease being in perpetuity and not subject to any term of residence. The area must not exceed ½ acre. The value of the land is re-appraised every 20 years, and the rent is fixed at 2½ per cent. of such value. Except in special circumstances no person may hold more than one lease. The land comprised in such lease may be purchased under certain conditions.

(xvi) *Suburban Holdings.* The Minister may set apart suburban Crown lands, or Crown lands within population boundaries, or within the Newcastle pasturage reserve, or any other Crown land, for disposal by way of suburban holdings. The area of each holding is determined by the Minister, and the title is a lease in perpetuity. Residence for 5 years is necessary, but the local land board may exempt a holder from this condition for periods not exceeding 12 months. The rent is 2½ per cent. of the capital value, which is re-appraised every 20 years. An additional suburban holding may be acquired by the holder of an original holding, but no person may hold more than one original holding, except as a mortgagee. A suburban holding may be purchased under certain conditions.

(xvii) *Week-end Leases.* A week-end lease must not exceed 60 acres, and is held in perpetuity. The rent is 2½ per cent. of the capital value, which, after 25 years, is re-appraised every 20 years. No residence condition is attached, but improvements other than fencing must be effected to the value of £1 per acre within 5 years, and any special conditions carried out that may be notified. No person may hold more than one week-end lease except as mortgagee.

(xviii) *Residential Leases.* A holder of a miner's right may, for the purpose of *bona fide* residence, acquire a residential lease on a gold field or mineral field, provided that:—(*a*) the area does not exceed 20 acres; (*b*) the term does not exceed 28 years; and (*c*) the conditions as prescribed are fulfilled. A resident holder of an area on a goldfield or mineral field may similarly hold a residential lease together with the area which he already holds, but the total area of the two together must not exceed 20 acres. A residential lease may be purchased under certain conditions.

(xix) *Leases in Irrigation Areas.* Lands in an irrigation area must be divided into (*a*) irrigable lands; (*b*) non-irrigable lands; and (*c*) town lands. The capital values or annual rentals are determined by the Water Conservation and Irrigation Commission. The following are the conditions under which leases are granted:—(*a*) *Irrigation Farms or Blocks.*—The title is a lease in perpetuity, and the annual rent is 2½ per cent. of the capital value, which, after the expiration of 25 years, is re-appraised every 20 years. A condition of the lease is residence in perpetuity by the holder. (*b*) *Leases of Non-irrigable Lands.*—Leases of non-irrigable lands may be granted under the same conditions as those of irrigation farms or blocks. (*c*) *Town Lands Blocks.*—The title to a town lands block is a lease in perpetuity or for such other term as may be determined, subject to the same terms and conditions as a lease of an irrigation farm except that (i) the annual rent must not be less than £1, (ii) the lease is subject to such building and other conditions as the Commission deems desirable, (iii) the condition of residence may be waived, and (iv) three adjoining blocks for the purpose of residence or four for business purposes may be held by one person. No residence condition attaches to a town block purchase or lease.

(xx) *Western Lands Leases.* Under the Western Lands Act the Minister may declare Crown lands in the Western Division open for lease, and specify the area and rent. No rental may be less than 2s. 6d. per square mile or part thereof nor more than 7d. per sheep on the carrying capacity, and may not be increased by more than 25 per cent. at each re-appraisement. The successful applicant is notified in the *Gazette* and must pay the first year's rent within one month after such notification. All leases issued under the Western Lands Act expire not later than the 30th June, 1943, except extended leases.

(xxi) *Forest Permits and Leases.* Under the Forestry Act, permits may be granted (*a*) to graze and water horses and cattle; (*b*) to occupy land as the site of a sawmill or other building, or any tramway, wharf, or timber depot; (*c*) to occupy land for charcoal burning or bee farming or other approved purpose; (*d*) to occupy land for growing fodder; and (*e*) to ringbark or otherwise kill or destroy trees. The fees are prescribed by regulation. Leases of land within State forests may also be granted for grazing or other approved purposes for any term not exceeding 20 years.

(xxii) *Areas Occupied under Leases and Licences.* On the 30th June, 1925, there were 60,699 leases and licences current under the Lands Department and the Western Land Board, comprising 114,374,397 acres of Crown lands.

The following table shows the areas which were granted under lease or licence during each year and those held under various descriptions of leases and licences at the end of the years 1920–21 to 1924–25:—

AREAS TAKEN UP UNDER LEASE OR LICENCE.—NEW SOUTH WALES, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Areas taken up under Crown Lands Act.	Acres.	Acres.	Acres.	Acres.	Acres.
Occupation Licences (auction) ..	36,000	..	10,150	34,526	11,700
Conditional leases (gazetted) ..	188,478	201,866	132,444	233,123	179,241
Conditional purchase leases ..	1,444	278	164	656	..
Settlement leases	10,430	1,292	19,753	9,900	4,731
Improvement leases	4,045	..	3,500	3,205	11,872
Annual leases	324,289	79,390	275,147	468,311	70,112
Scrub leases	22,420	..	4,718	9,812	9,870
Special leases	112,234	182,119	131,098	88,506	109,692
Residential leases	592	497	319	359	277
Permissive occupancies	103,740	36,642	436,425	439,682	451,962
Prickly-pear leases	1,140	48	..	..	..
Crown leases	671,247	700,419	550,254	406,721	367,031
Homestead farms	437,713	378,180	460,502	371,816	524,632
Homestead selections and grants	..	..	9,124	10,017	2,922
Suburban holdings	6,764	9,121	5,130	3,617	641
Week-end leases	159	48	219	108	61
Leases of town lands	51	70	2	..	..
Returned soldiers' special holdings	4,872	6,213	110	22	4
Inferior land leases	..	..	1,280	..	10,053
Irrigation farms	..	..	..	1,338	1,357
Areas taken up under Western Lands Act.					
Leases	3,346,079	2,520,974	271,166	2,710,890	4,677,997
Permissive occupancies	636,451	169,460	382,445	38,660	180,483
Total	5,908,148	4,286,617	2,693,950	4,831,269	6,614,638

AREAS OCCUPIED UNDER LEASE OR LICENCE.—NEW SOUTH WALES, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	Acres.	Acres.	Acres.	Acres.	Acres.
Outgoing pastoral leases ..	569,425	435,970	399,944	270,222	227,240
Occupation licences (i) Ordinary ..	3,191,614	2,782,896	2,787,985	2,455,642	2,207,313
Occupation licences (ii) Preferential ..	738,554	693,212	770,192	715,240	578,930
Homestead leases	35,687	15,207	15,207	..	..
Condit'l leases (i) Gazetted ..	14,149,642	14,091,229	14,030,087	14,075,585	13,939,063
Condit'l leases (ii) Not gazetted (under provisional rent)	137,897	78,622	103,923	(*c*)	(*c*)
Conditional purchase leases ..	368,669	322,548	293,013	265,643	246,355
Settlement leases	3,973,171	4,032,936	3,953,363	3,836,205	3,712,740
Improvement leases	3,288,555	3,177,936	2,903,511	2,707,312	2,185,952
Annual leases	2,409,661	1,914,217	1,949,887	1,694,209	1,477,571
Scrub leases	1,502,434	1,247,926	1,165,782	1,099,355	1,046,596
Snow leases	129,020	126,020	126,020	126,020	126,020
Special leases	743,049	828,684	828,091	795,780	795,908
Inferior land leases	69,710	68,350	59,787	59,787	72,200
Blockholders' leases	1	..	..	..	..
Residential leases (on gold and mineral fields)	12,991	12,541	11,849	11,527	10,928
Church and school lands ..	11	11	11	11	11
Permissive occupancies (*b*) ..	1,878,675	1,915,317	2,063,273	2,182,302	2,441,260
Prickly-pear leases	35,932	30,502	24,829	21,028	19,298
Crown leases	3,664,798	4,128,533	4,519,500	4,764,214	4,874,737
Homestead farms	2,296,848	2,622,756	3,014,076	3,309,141	3,772,847
Homestead selections and grants ..	895,330	895,298	915,483	951,594	917,688
Suburban holdings	45,475	51,071	59,732	56,376	53,994
Week-end leases	418	487	714	791	575
Leases of town lands	71	139	134	129	121
Returned soldiers' special holdings	20,118	26,567	28,711	23,826	24,986
Irrigation farms and blocks ..	..	..	..	129,414	282,246
Western land leases and licences (*a*)	76,009,212	75,975,852	75,368,253	75,365,499	75,642,064
Total	116,166,968	115,474,827	115,393,357	114,916,852	114,656,643

(*a*) Includes permissive occupancies. (*b*) Permissive occupancies in the Western Division not included. (*c*) Not available.

2. **Victoria.**—(i) *Perpetual Leases.* A person may take up as a perpetual lease an area of Crown land varying from 600 acres of first class land to 2,880 acres of Class 4A land. The annual rental is fixed by the Board of Land and Works every 10 years. Specified improvements must be effected during the first 6 years, and residence on or within 5 miles of the land for 6 months during the first year and for 8 months during each of the 4 following years is necessary, but, if one-fourth of the allotment be cultivated during the first 2 years and one-half before the end of the fourth year, the residence covenant is not enforced.

(ii) *Auriferous Lands Licences.* Licences may be granted for any period not exceeding one year, entitling the holder to reside on or cultivate auriferous land not comprised within a city or town, and not exceeding in extent 20 acres. The terms and conditions are such as are approved by the Governor. No person may hold more than one licence. After the value of the land has been paid in rent, only a nominal rent is payable.

(iii) *Leases of Swamp or Reclaimed Lands.* Swamp or reclaimed lands may be leased in allotments not exceeding 160 acres, for a term of 21 years, subject to the lessee keeping open all drains, etc., thereon. The rent is fixed according to the value of the land as determined by the Board of Land and Works. The lessee must effect improvements to the value of 10s. per acre in each of the first 3 years, but residence on the land is not necessary.

(iv) *Perpetual Leases of Swamp or Reclaimed Lands.* The conditions under which these leases may be taken up are similar to those of ordinary leases, except that the lease is held in perpetuity, and the rent is fixed at 4 per cent. of the value of the land, which is re-appraised every 10 years.

(v) *Grazing Licences.* Grazing licences may be granted for a term not exceeding 7 years subject to cancellation at any time. In the case of returned soldiers, leases may be granted for 14 years. The rental varies according to the class of land.

(vi) *Perpetual Leases of Mallee Land.* Perpetual leases of Mallee land may be granted for areas ranging from 640 acres of first class land to 4,000 acres of Class 4A land. The rent is 1½ per cent. of the value of the land, which is re-appraised every 10 years. Residence is necessary during 6 months of the first year and during 8 months in each of the following 4 years, but the residence condition is waived if one-fourth of the land is cultivated within 4 years and one-half by the end of the sixth year, or, alternatively, if improvements, ranging in value from 10s. to 2s. 6d. per acre, according to the class of land, are effected during the first 6 years.

(vii) *Miscellaneous Leases and Licences.* Leases up to 21 years at an annual rental of not less than £5, and annual licences at various rates are issued for different purposes, such as sites for residences, gardens, inns, stores, smithies, butter factories, creameries, brickworks, etc. Licensees who have been in possession of land for 5 years (if such land is situated outside the boundaries of a city) may purchase the same at a price to be determined by the Board.

(viii) *Bee Farm Licences.* Annual licences for bee farms may be issued for areas of not more than 10 acres at such fees as the Minister may fix.

(ix) *Bee-Range Area Licences.* A bee-range licence may be secured on payment of ½d. for every acre of Crown land within a radius of 1 mile of the apiary, and in connexion therewith all suitable timber may be protected from destruction although held under grazing lease or licence.

(x) *Eucalyptus Oil Licences.* A licence may be granted of land suitable for the growth of trees in connexion with the manufacture or production of eucalyptus oil. The licence is in force for such period and subject to such conditions as may be prescribed.

(xi) *Forest Leases.* Under the Forests Act, a person may obtain, for a term not exceeding 12 years, a lease of Crown land within any reserved forest for (*a*) the grazing of cattle; (*b*) sawmilling purposes, but not exceeding 3,000 acres in extent; or (*c*) any miscellaneous purpose for which a miscellaneous lease may be granted under the Land Act. The rent and conditions are as prescribed.

(xii) *Forest Licences.* Under the same Act, and subject to prescribed conditions, the Forests Commission may grant to any person for any term not exceeding one year a licence to occupy (*a*) any area for the grazing of cattle; (*b*) a special area, not exceeding 640 acres, for the cutting of timber; (*c*) an area, not exceeding one acre, for residence purposes; or (*d*) an area for any of the miscellaneous purposes for which a miscellaneous licence may be granted under the Land Acts.

(xiii) *Forest Townships.* A sufficient part of any reserved forest may be set apart as a forest township site, and divided into allotments. Such allotments may, upon the prescribed terms and rental, be leased for any term not exceeding 20 years to any person engaged in the forest industry or to any business person, and these leases are renewable.

(xiv) *Areas held under Leases and Licences.* The following statement shows the areas of Crown lands occupied under leases and licences from 1920 to 1924. All grazing area leases expired on the 29th December, 1920:—

CROWN LANDS UNDER LEASE OR LICENCE.—VICTORIA, 1920 TO 1924.

Tenure.	1920.	1921.	1922.	1923.	1924.
	Acres.	Acres.	Acres.	Acres.	Acres.
Grazing area leases	2,329,343	..	..	..	..
Grazing licences (exclusive of Mallee) ..	6,242,276	6,649,821	6,647,808	6,647,800	6,393,679
Mallee lands	4,908,543	1,680,670	2,405,320	2,405,328	1,699,422
Auriferous lands (licences)	65,590	64,135	61,577	56,789	53,227
Swamp lands (leases)	1,478	1,565	1,697	2,854	2,866
Perpetual leases	7,559	7,559	7,559	5,240	4,882
Perpetual leases under Mallee Lands Acts 1896–1901	141,957	128,684	113,632	102,518	100,657
Total	13,696,746	8,532,434	9,237,593	9,220,529	8,254,733

3. **Queensland.**—(i) *Perpetual Lease Selections.* The area of a perpetual lease selection must not exceed 2,560 acres, and is held under a lease in perpetuity. An applicant for such lease, who undertakes to reside on his selection during the first 5 years of his lease, has priority over other applicants, and further priority is granted to an applicant who, in addition, agrees to cultivate at least one-twelfth of his selection within the first 3 years. The annual rent during the first 15 years is 1½ per cent. of the notified capital value, provided that the rent for the second year is a peppercorn (if demanded). The annual rent for each period of 15 years thereafter is determined by the Land Court at a similar percentage of the unimproved capital value of the land as fixed by that Court. Where the land is in a prickly-pear area or a buffer area under the Prickly-pear Act, the maximum area allowed to one person may exceed 2,560 acres. The duration of each period of a selection under such an area is 30 years, and the Prickly-pear Land Commission, instead of the Land Court, fixes the rent.

(ii) *Perpetual Lease Prickly-pear Selections.* The maximum area for a perpetual lease prickly-pear selection is 2,560 acres, and the same conditions as to priority apply as in the case of an ordinary perpetual lease selection. The lease is in perpetuity and contains a condition for the destruction of the prickly pear thereon. The rent for the first 30 years is a peppercorn (if demanded), and for each period of 30 years thereafter is 1½ per cent. of the unimproved capital value as determined by the Prickly-pear Land Commission.

(iii) *Pastoral Leases.* The Minister may, by notification in the Gazette, declare any Crown land open for pastoral lease, subject to conditions as to fencing, improvements, and the destruction of noxious weeds. The notification must specify the areas to be leased, the maximum area which one person may hold, the term of the lease, which must not exceed 30 years, and the rent per square mile for the first period of 10 years. The rent for the second and third periods of 10 years is fixed by the Land Court. In a prickly-pear area or buffer area the periods are 20 years, and the Prickly-pear Land Commission fixes the rent.

(iv) *Preferential Pastoral Leases.* When the terms of the opening notification so indicate, land may be applied for during the first 6 months only as preferential pastoral leases, and, in that case, no person who is under 16 years of age or is the selector or lessee of a grazing selection or the owner of freehold land of an area of 5,000 acres and upwards shall be competent to apply for or hold the land as a preferential pastoral lease. The holder of an ordinary pastoral lease will also be debarred from applying for or holding the specified land under preferential pastoral lease if the area of the latter combined with that of the pastoral holding exceeds the maximum area mentioned in the notification. When an applicant for a preferential pastoral lease on making his application offers that the holding shall be subject to the condition of personal residence during the first 7 years, and undertakes to perform that condition, he receives priority over applicants who do not make such offer. In other respects the conditions as regards improvements and the destruction of noxious weeds are the same as in the case of an ordinary pastoral lease. The holder of a preferential pastoral lease must hold and use the land for his own exclusive benefit, but such stipulation is not made in connexion with an ordinary pastoral lease.

(v) *Prickly-pear Leases.* The Minister, on the recommendation of the Prickly-pear Land Commission, may, by notification in the *Gazette*, declare any Crown land (being prickly-pear land) open for prickly-pear lease subject to any of the conditions applicable to pastoral holdings situated outside a prickly-pear area or buffer area. The land comprised in a prickly-pear lease or any part thereof may be resumed for agricultural or mixed farming settlement without compensation except for improvements. The rent for the second and each succeeding period of 10 years is determined by the Prickly-pear Land Commission.

(vi) *Occupation Licences.* Annual licences are granted to occupy Crown lands, either after notification in the *Gazette* or by the Minister without competition. In the former case the rent is as notified, and in the latter is as fixed by the Minister. Licences expire on the 31st December in each year, but may be renewed from year to year upon payment of the rent on or before the 30th September, and the rent may be increased on or before that date. A licence is determinable on 3 months' notice.

(vii) *Special Leases.* The Governor may issue a lease of any portion of land for any manufactory, or for any industrial, residential or business purposes, or for any race-course or recreation purposes, for a period not exceeding 30 years upon such conditions as he thinks fit. A lease may also be issued of reserved lands which are infested with noxious weeds or scrub, conditionally on the lessee destroying such noxious plants.

(viii) *Grazing Selections.* Crown land may be leased as grazing selections, but no person may hold a grazing selection or selections exceeding 60,000 acres in the aggregate. A grazing selection must be fenced within 3 years with a stock-proof fence, a rabbit-proof fence, a marsupial-proof fence or with a fence which is both rabbit-proof and marsupial-proof as the terms of the notification opening the land for selection require, and when so fenced the selector is entitled to a lease. A condition may be imposed for the destruction of noxious weeds. The annual rent for the first 7 years is as notified or tendered, and for each succeeding period of 7 years is as determined by the Land Court, except in the case of selections in a prickly-pear area or a buffer area. In such cases the Prickly-pear Land Commission determines the rent for the period of 14 years instead of 7 years. Grazing selections may be either (*a*) grazing farms, or (*b*) grazing homesteads ; and when land is declared open for grazing selection it must be available for grazing homesteads only during the first 56 days. If at the expiration of that period the land has not been applied for it shall for a further period of 34 days be deemed to be withdrawn from selection, after which it will be available for selection as a grazing farm only. The lease of a grazing farm is subject to the condition of occupation during the whole term, and that of a grazing homestead to the condition of personal residence during the whole term.

(ix) *Auction Perpetual Leases.* Perpetual leases of (*a*) town lands, in areas not exceeding half-an-acre ; (*b*) suburban lands, in areas not exceeding 5 acres ; and (*c*) country lands, in areas not exceeding 640 acres, may be sold by auction to any person, to trustees for religious or charitable bodies, or to companies. Improvements to the value of at least £25 must be effected within 2 years, and the rent during the first 15 years is fixed at 3 per cent. of the upset price, or of such greater capital sum as has been bid by the purchaser. For each period of 15 years thereafter, the rent is 3 per cent. of such unimproved value of the land as is determined by the Land Court. No person may hold more than 6 town or 6 suburban leases in any one town or adjacent thereto.

(x) *Areas taken up under Lease or Licence.* The following table gives particulars of the areas taken up under lease or licence during the years 1920 to 1924 :—

AREAS TAKEN UP UNDER LEASE OR LICENCE.—QUEENSLAND, 1920 TO 1924.

Tenure.	1920.	1921.	1922.	1923.	1924.
	Acres.	Acres.	Acres.	Acres.	Acres.
Pastoral leases	4,017,080	1,121,800	2,998,480	3,326,320	4,594,760
Occupation licences	4,274,440	5,994,440	7,993,560	7,757,440	4,291,600
Grazing farms	2,009,034	949,432	1,306,603	1,938,428	744,565
Grazing homesteads	2,807,409	1,853,990	1,673.724	2,853,341	3,083,548
Perpetual lease selections ..	490,546	419,886	250,518	205,282	278,137
Perpetual lease prickly-pear selections	435,299	270,985	154,359	140,093	85,296
Auction perpetual leases, Town ..	142	150	206	175	127
,, ,, ,, Suburban	262	236	371	187	214
,, ,, ,, Country	889	916	924	1,067	1,293
Special leases	6,511	11,806	18,012	25,905	55,015
Leases of reserves	39,173	28,190	18,050	46,741	33,915
Total	14,080,785	10,651,831	14,414,807	16,294,979	13,168,470

The following particulars are available respecting leases taken up in 1925 :—

Grazing farms	1,167,474 acres.
Grazing homesteads	2,155,991 acres.
Perpetual lease selections	366,952 acres.
Perpetual lease prickly-pear selections	169,442 acres.

The gross area held at the end of the year 1924 for purely pastoral purposes was 350,467 square miles.

Seven non-competitive perpetual leases were issued during 1925, the total area being 91 acres.

The total areas occupied under lease or licence will be found in a table at the end of this chapter.

4. **South Australia.**—(i) *Perpetual Leases.* Crown lands (except town lands) which have been surveyed, or of which the boundaries have been delineated in the public maps, may be offered on perpetual lease. Details concerning the area which is to be cleared and rendered available for cultivation, and the rent to be paid, are notified in the *Gazette.* An applicant must deposit with his application 20 per cent. of the first year's rent (if any). Preference is given in allotting land to the applicant who agrees to reside on the lease for 9 months in each year. If no application is made within 3 months from the date of notification, the Commissioner may offer the land at a reduced rent. No lease may be granted to any person of lands the unimproved value of which exceeds £5,000, except where the land is suitable for pastoral purposes only, while no lease is granted if the carrying capacity of all the lands held by the lessee would exceed 5,000 sheep, or, if outside Goyder's line of rainfall, 10,000 sheep. The lessee must fence the land within 5 years, and clear and render available for cultivation not less than one-eighth during the first 2 years, one-eighth during the second 2 years, and then one-eighth annually until three-quarters have been so cleared and rendered available for cultivation.

(ii) *Special Perpetual Leases.* Where the Commissioner directs, the following provisions apply respecting the payment of rent :—(*a*) No rent is payable for the first 4 years ; (*b*) from the end of the fourth to the end of the tenth year, rent is payable at the rate of 2 per cent. of the value of the land ; and (*c*) thereafter, 4 per cent. of the value of the land is payable in perpetuity.

(iii) *Homestead Blocks.* The conditions applying to these blocks are the same as those for blocks held under agreement to purchase, except that they are leased in perpetuity and cannot be sold. (See § 4.)

(iv) *Miscellaneous Leases.* Leases may be granted for various purposes for any term not exceeding 21 years at such rents and upon such conditions as the Commissioner may determine.

(v) *Licences.* Licences may be granted of Crown lands for (*a*) fishermen's residences and drying grounds, (*b*) manufactories, fellmongering establishments, slaughter houses, brick or lime kilns or sawmills, (*c*) depasturing sheep, cattle or other animals, or (*d*) any other approved purpose. These licences are in force for one year only and are subject to such fees and conditions as the Commissioner may impose.

(vi) *Leases of Resumed Lands.* The Commissioner may resume possession of any well or other place where water has been found, and of not more than 1 square mile of land contiguous thereto, or, in the case of artesian water, 5 square miles. A lease of such land may be offered by private contract or by auction, the original lessee of the land having a preferential right to such lease. The lessee must maintain an accommodation house, if required, and construct facilities for watering stock.

(vii) *Pastoral Leases.* These leases are issued under the Pastoral Acts, and are granted for a term of 21 or 42 years. The rent is fixed by the Commissioner of Crown Lands, and is based on the unimproved value, which is re-appraised in the case of 42 years' leases after the expiration of 21 years. The lessee must expend in improvements such sum not exceeding 10s. per square mile per annum as is recommended by the Pastoral Board, but this covenant ceases when £3 per square mile has been expended. Conditions as to stocking must also be fulfilled.

(viii) *Leases to Discoverers of Pastoral Country, etc.* Under the same Acts, a person who has discovered pastoral lands or has applied for a lease which has been abandoned for 3 years or more on account of vermin may obtain a lease for 42 years at a peppercorn rental for the first 10 years, at 6d. per square mile for the next 10 years, and thereafter at a rent of 2s. per square mile annually.

(ix) *Special Leases to Discoverers of Water.* The Governor may, under the Pastoral Acts, issue a permit to any person desirous of searching for water. The permit is in force for one year and confers on the holder the exclusive right to search for water on the land specified therein, and a preferential right to a lease. The holder of a permit who has discovered a permanent supply of water equal to not less than 4,000 gallons per day suitable for great cattle may be granted a lease not exceeding 100 square miles at a similar rental to that paid by lessees who have discovered pastoral country (see preceding subsection (viii)). The conditions of stocking are modified, and for 10 years the land is exempt from rating under the Wild Dogs Act. The discoverer of such water supply is also entitled to a reward of at least £200, provided the supply is not less than 3 miles from any existing well or bore.

(x) *Irrigation Blocks.* Under the Irrigation Act, blocks of land are offered in irrigation areas on perpetual lease at rentals fixed by the Irrigation Commission. Provided that the block has not been cultivated, one-quarter only of the rent is payable for the first year, one-half for the second year, three-quarters for the third year, and thereafter the full amount annually. Not more than 50 acres of irrigable or reclaimed land may be held by one person. Residence for 9 months in each year is necessary, and certain specified improvements must be effected.

(xi) *Town Allotments in Irrigation Areas.* Perpetual leases of town allotments in irrigation areas must be offered for sale by auction, and, if not so sold, may be sold by private contract at not less than the upset price. A lessee must within 18 months effect improvements to the value of not less than 10 times the annual rent, but not less than £150 if the allotment is used for residential purposes, or £200 if used otherwise. Annual licences may also be granted to occupy town allotments.

(xii) *Forest Leases.* Leases of land comprised in any forest reserve under the Woods and Forests Act, for cultivation or grazing or both, are open to application for allotment by the Land Board for any term not exceeding 42 years. With the approval of the Commissioner of Forest Lands such land may also be leased by the Land Board. With the exception of leases in certain scheduled forest reserves, a lessee may surrender his lease and be granted a perpetual lease or agreement to purchase in lieu thereof.

(xiii) *Areas Leased.* The following table gives the areas leased during each of the years 1920–21 to 1924–25 under the different forms of lease tenure :—

AREAS LEASED.—SOUTH AUSTRALIA, 1920-21 TO 1924-25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	Acres.	Acres.	Acres.	Acres.	Acres.
Perpetual leases—					
Homestead farms (repurchased)	15	..	1	..	..
Irrigation and reclaimed lands ..	804	911	490	2,893	3,616
Other Crown lands	147,361	159,007	284,074	123,039	91,620
Miscellaneous leases					
Grazing	98,060	1,294	136,159	21,626	133,898
Grazing and cultivation ..	15,102	11,687	64,371	4,082	116,733
Agricultural College land ..	..	..	..	..	..
Forest	3,210	2,005	21,840	..	19,840
Pastoral leases	2,918,400	1,437,440	2,259,200	2,727,680	958,400
Total	3,182,952	1,612,344	2,766,135	2,879,320	1,324,107

The total areas held under lease are given in the table at the end of this chapter.

5. **Western Australia..**—(i) *Pastora Leases.* Crown lands may be leased for pastoral purposes, the maximum areas of the blocks and the rentals varying according to the division in which they are situated, but no person may acquire more than 1,000,000 acres. Pastoral leases must be stocked within 2 years at the rate of 10 head of sheep or 2 head of large stock for each 1,000 acres, within 5 years with double that quantity, and for the remainder of the term with 3 times that number. Pastoral leases may be held for a term expiring on the 31st December, 1948, and the rentals are re-assessed at the end of 15 years, but may not be increased by more than 50 per cent. Lessees must improve their land to the extent of £5 per 1,000 acres within 5 years, and to the extent of £10 per 1,000 acres within 10 years.

(ii) *Special Leases.* The Governor may grant special leases of Crown lands, not exceeding 25 acres in area, for a term not exceeding 21 years, at a yearly rental of not less than £2. Such leases are granted for miscellaneous purposes, such as obtaining guano, sites for inns or factories, market gardens, and similar objects.

(iii) *Residential Leases.* Any unalienated town, suburban or rural lands, may be set apart for residential leases and subdivided into lots not exceeding ½ acre each. The terms and conditions are prescribed by regulation. Any holder of a residential lease, who has resided thereon for 2 years, may convert the same into a working-man's block.

(iv) *Leases of Town and Suburban Land.* The Governor may lease any town or suburban lands for a period of 99 years at an annual rental equal to 4 per cent. of capital value, which is to be re-appraised every 10 years.

(v) *Irrigation Leases.* Under the Rights in Water and Irrigation Act, any land may be acquired for or dedicated to the purposes of that Act, and the Minister may grant leases in perpetuity of any such land at an annual rent based on the unimproved capital value of the demised land (subject to re-appraisement at prescribed periods) and the value of the improvements thereon, subject to such conditions as are prescribed.

(vi) *Forest Permits.* Under the Forests Act, the Conservator of Forests may issue permits entitling the holders (*a*) to occupy land as the site of a sawmill, as a timber depot, for growing fodder, or for any other approved purpose ; or (*b*) to work a sawmill ; or (*c*) to make roads or tramways ; or (*d*) to graze and water cattle—on lands under his jurisdiction. The term of a permit must not exceed 10 years, and permits must be submitted to public auction. The Conservator of Forests may also grant forest leases on such conditions as he may think fit, for periods not exceeding 20 years, for grazing, agriculture, or other purposes not opposed to the interests of forestry.

(vii) *Areas Leased.* The subjoined table gives the number of leases and the areas of land leased by the Lands Department during the years ending 30th June, 1921 to 1925 :—

LEASES.—WESTERN AUSTRALIA, 1920–21 TO 1924–5.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of leases issued ..	694	821	504	605	537

AREAS OF LEASES ISSUED.

	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	Acres.	Acres.	Acres.	Acres.	Acres.
Pastoral leases	20,303,900	28,259,124	5,738,313	20,361,793	20,841,066
Special leases	7,762	8,874	3,838	2,265	2,894
Leases of reserves	38,573	374,338	36,396	25,370	56,275
	20,350,235	28,642,336	5,778,547	20,389,428	20,900,235

The total areas leased are given in the table at the end of this chapter.

6. **Tasmania.**—(i) *Grazing Leases.* Leases of grazing lands are put up to auction, the upset price being fixed by the Commissioner, but at not less than an annual rent of 5s. per 100 acres. Lands not disposed of by auction may be gazetted and let by private contract.

(ii) *Leases of Land Covered with Button-grass, etc.* The Commissioner may lease to any person, for a period not exceeding 26 years, any Crown land covered with button-grass, river-grass or rushes, at a rental which must not be less than 25s. per 1,000 acres, provided that the lessee covenants to improve the area to the value of £2 10s. per 1,000 acres per annum.

(iii) *Leases of Mountainous Land.* Leases for a period not exceeding 21 years may be granted of land situated at an altitude of not less than 1,800 feet. The rent is not less than £2 10s. per 1,000 acres per annum, and the lessee must improve the land to the value of £5 per 1,000 acres annually.

(iv) *Miscellaneous Leases.* The Commissioner may lease for a period not exceeding 14 years land for wharves, jetties, watercourses, manufactories, railways, tramways etc. The lessee must carry out the conditions stated in the lease and pay the prescribed rent half-yearly.

(v) *Temporary Licences.* The Commissioner may grant to any person a temporary licence to hold, for not exceeding 12 months, any Crown lands for such purposes and on such terms and conditions as may be prescribed.

(vi) *Occupation Licences.* An occupation licence for a year expiring on the 31st December may be issued at a fee of 5s. to any person, such licence entitling him to occupy the surface of any Crown land within a mining area not exceeding ¼ acre in extent.

(vii) *Pastoral Leases.* A holder of an occupation licence or any approved person may lease within a mining area by private contract a pastoral lease for a period not exceeding 14 years, upon such terms and conditions as the Governor may see fit. No such lease may exceed 1,000 acres in area.

(viii) *Residence Licences.* A residence licence, for which a fee of 10s. is charged, and which is in force until the 31st December, entitles the holder to occupy for residence an area not exceeding ¼ acre in any town situated within a mining area which has been surveyed and gazetted as available therefor.

(ix) *Business Licences.* A business licence, costing £1 for a year, expiring on the 31st December, authorizes the holder to occupy for business purposes the surface of any Crown land within a mining area, not exceeding ¼ acre in area.

(x) *Forest Leases, Licences and Permits.* Under the Forestry Act, the following leases, permits, and licences may be granted on lands contained in State forests and timber reserves :—(*a*) *Forest Permits.* A forest permit confers upon the holder, for not exceeding 15 years, exclusive rights over the land therein defined for all purposes connected with the obtaining, conversion and removal of timber and forest produce. Such permit may be submitted to public auction or tender, and is subject to the payment of royalties on all produce taken, and to the prescribed conditions ; (*b*) *Occupation Permits.* An occupation permit may be granted for a period not exceeding 15 years for sawmill sites, timber depots, roads and tramways. A similar permit may also be issued entitling the holder to graze and water cattle ; (*c*) *Forest Licences.* A forest licence authorizes the holder to take forest produce, subject to the payment of fees and royalties as prescribed. The term of such licence may not exceed 3 months ; (*d*) *Forest Leases.* Land may be leased on such conditions as the Minister may think fit for not longer than 14 years for grazing, agricultural, or other purposes. No compensation is payable for improvements, but the licensee may remove any buildings or fences, or dispose of them to an incoming tenant ; (*e*) *Plantation Leases.* The Minister may grant, for not exceeding 60 years, leases for plantation purposes at such rent and upon such conditions as may be prescribed.

(xi) *Areas Leased.* The following table gives the areas leased during each year and the total areas leased at the end of the years 1920 to 1924 :—

AREAS LEASED.—TASMANIA, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
AREAS LEASED DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Pastoral leases	340.876	197,597	89,666	171,484	188,652
TOTAL AREAS LEASED AT END OF YEAR.					
Ordinary leased land	1,540,000	1,608,000	1,577,653	1,593,000	1,575,000
Islands	107,000	108,000	107,000	107,000	106,000
Land leased for timber	230,524	236,847	308,072	272,270	282,673
Total	1,877,524	1,952,847	1,992,725	1,972,270	1,963,673

7. Northern Territory.—(i) *Pastoral Leases.* A pastoral lease may be granted for such term, not exceeding 42 years, as the Land Board determines. The rental for the first period is fixed by the Board, and is subject to re-appraisement on such dates as are specified in the lease or as are prescribed.

(ii) *Agricultural Leases.* Agricultural lands are classified, and the maximum area which may be included in any one lease is as follows :—Division A, Cultivation Farms, Class 1, 1,280 acres, Class 2, 2,560 acres : Division B, Mixed Farming and Grazing, Class 1, 12,800 acres, Class 2, 38,400 acres. Agricultural leases are granted in perpetuity, and the rent for the first period is fixed by the Land Board, and is re-appraised every 21 years. The lessee must—(*a*) in the case of lands for mixed farming and grazing, stock the land to the extent prescribed by the regulations and keep it so stocked ; (*b*) establish a home within 2 years and reside on the leased land for 6 months in each year in the case of land for cultivation, and for 4 months in each year in the case of land for mixed farming and grazing ; (*c*) cultivate the land to the extent notified by the Board ; and (*d*) fence the land as prescribed.

(iii) *Leases of Town Lands.* Leases of town lands are granted in perpetuity, the rental being fixed every 14 years. Such leases must, in the first instance, be offered for sale by public auction, and if not so sold, may be allotted by the Board to any applicant, at the rental fixed by the Board. The lessee must erect, within such time as is notified, buildings to the value specified in the conditions of sale.

(iv) *Miscellaneous Leases.* The Land Board may grant a lease of any portion of Crown lands, or of any dedicated or reserved lands, for any prescribed or approved purpose. Such leases are for a term not exceeding 21 years, and may be offered for sale by public auction, or granted to any applicant at an annual rental fixed by the Board.

(v) *Grazing Licences.* Licences may be granted to graze stock on Crown lands for such period, not exceeding one year, as is prescribed, and at the rent and on the conditions specified.

(vi) *Occupation Licences.* Licences may be granted for any period not exceeding 5 years, and on specified rentals and conditions, for the purpose of drying or curing fish, or for any manufacturing or industrial purpose, or for any prescribed purpose.

(vii) *Miscellaneous Licences.* The Board may grant licences for miscellaneous purposes for a period not exceeding 12 months on prescribed terms and conditions.

(viii) *Leases to Aboriginals.* The Governor-General may grant to any aboriginal native, or to the descendant of any aboriginal native, a lease of Crown lands not exceeding 160 acres for any term of years upon such terms and conditions as he thinks fit.

(ix) *Areas held under Leases, Licences, and Permits.* The following table shows the total areas held under lease, licence, and permit at the end of the years 1921 to 1925 :—

NORTHERN TERRITORY.—AREAS HELD UNDER LEASES, LICENCES, OR PERMITS, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
	Acres.	Acres.	Acres.	Acres.	Acres.
Right of purchase leases ..	356	356	356	..	..
Pastoral leases and grazing licences	136,464,960	130,410,720	134,214,800	137,209,866	143,673,866
Other leases and licences ..	1,211,337	5,167,720	2,112,816	1,945,088	2,740,840
Total	137,676,653	135,578,796	136,327,972	139,154,954	146,414,706

On the 31st December, 1925, the areas held under leases and licences were :—Pastoral leases, 111,747,466 acres ; annual pastoral leases, 33,280 acres ; pastoral permits, 2,211,840 acres ; grazing licences, 29,681,280 acres ; miscellaneous leases (including water leases), 2,738,994 acres ; mining leases, 1,846 acres. There were also 32,724 square miles under reserve for aboriginal natives of Australia, 8,210 square miles mostly over pastoral holdings under licences to prospect for mineral oil and coal, and 1,051,520 acres mission station leases.

8. Federal Capital Territory.—(i) *General.* Under the Seat of Government (Administration) Act 1910, Crown lands in the Territory may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of that Act. Leases of land in the City Area are granted under the City Area Leases Ordinance 1925, and leases of other lands under the Leases Ordinance 1918–25. Land is also leased for various purposes in the City Area under the Church Lands Leases Ordinance 1924, Leases (Special Purposes) Ordinance 1925, and the Recreation Land Leases Ordinance 1923.

(ii) *City Leases.* The Minister may grant leases in the city area of any Crown land for business or residential purposes. Such leases may be issued for a period not exceeding 99 years at a rental equal to not less than 5 per cent. of the unimproved value of the land, which value is subject to re-appraisement at the expiration of 20 years, and thereafter every 10 years. A suitable building must be commenced within 2 years and completed within 3 years unless an extension of time as may be approved is allowed.

The first public auction sale of City Leases in Canberra was held on 12th December, 1924, at which 393 blocks were offered, including business and residential subdivisions. The leases of 146 blocks were sold at the auction, and 139 have been sold subsequently, while 64 blocks have been withdrawn from lease and buildings for public servants are being erected thereon by the Commission. Further subdivisions for sale and business purposes will be offered this year.

(iii) *Leases of other Lands.* Leases may be granted for grazing, fruitgrowing, horticulture, agriculture, residential, business, or other purposes for a period not exceeding 25 years. The annual rental is 5 per cent. of the assessed value of the land, including improvements which are the property of the Crown, plus the amount of rates payable. No person may hold under lease land of a greater value than £6,000, exclusive of the value of buildings and fences thereon.

(iv) *Areas of Acquired, Leased, etc., Lands.* At the end of the year 1925 the area of acquired lands was 209,531 acres; of lands alienated, 46,404 acres; of lands in process of alienation, 54,832 acres; of leases, 103,511 acres; and unoccupied, 169,382 acres. These figures are exclusive of 17,920 acres in the Jervis Bay area.

§ 6. Closer Settlement.

1. New South Wales.—(i) *Acquisition of Land.* For the purposes of the Closer Settlement Act, the Governor may constitute three Closer Settlement Advisory Boards, but at present one such Board deals with closer settlement for the whole State. Where the Board reports that any land is suitable for closer settlement, the Governor may either purchase it by agreement with the owner, or, failing such agreement, where the value of the unimproved land exceeds £20,000, resume it compulsorily. All such purchases or resumptions must be approved by Parliament. Land within 15 miles of a railway, the construction of which is authorized, if the property of one owner, and exceeding £10,000 in value, may also be purchased or resumed.

Under the provisions of the Crown Lands Consolidation Act 1913, the Governor may acquire either by way of purchase or resumption, after report by the Local Land Board, any land of any tenure for certain purposes, including settlement. Private lands may also be acquired for Closer Settlement by direct purchase under Executive Council authority.

(ii) *Disposal of Acquired Lands.*—(*a*) *Closer Settlement Purchase and Soldiers' Group Purchase.*—Lands acquired or resumed for closer settlement are mainly disposed of as Settlement Purchase under the Closer Settlement Acts or Soldiers' Group Purchase under the Returned Soldiers' Settlement Act 1916. The capital value is as notified, and represents roughly the cost of acquisition plus the cost of subdivision, etc. Unless otherwise specified the deposit and annual instalment are 6½ per cent. of the capital value, including interest at the rate of 5½ per cent. per annum. The whole of the balance of the purchase-money may be paid at any time. Returned soldiers taking up a settlement purchase or group purchase are not required to lodge any deposit. Residence for 5 years is obligatory, and in the case of a settlement purchase permanent improvements to the extent of 10 per cent. of the value of the land must be effected within 2 years, and an additional 15 per cent. within 5 years. Improvements existing on the land when allotted are, however, taken into consideration in satisfaction of the improvement conditions.

(*b*) *Sales by Auction.* Land acquired for closer settlement may also be set apart as township allotments. Such allotments, which must not exceed ½-acre in area, may be sold by auction, but no person may hold more than three such allotments, except by way of mortgage.

(c) *After-auction Sales.* When any land has been offered for sale or lease by auction, and is not so sold or leased, any person may apply for the same at the upset price. A deposit of 25 per cent. of the upset price must be lodged with the application, and the balance paid according to the conditions notified in the *Gazette*. Such land may also be set apart for disposal under the Crown Lands Act.

(d) *Permissive Occupancies.* The Minister may grant permits to occupy any acquired land which remains undisposed of, upon such terms and conditions as he thinks fit.

(iii) *Closer Settlement Promotion.* Any three or more persons, or one or more discharged soldiers, each of whom is qualified to hold a closer settlement purchase, may negotiate with an owner of private lands to purchase a specified area on a freehold basis. If the Minister approves, the land is bought by the Crown and paid for in cash or debentures, but the freehold value including improvements must not exceed £3,000 for any one person, or in exceptional cases £3,500. If the land is suitable for grazing only, the value may be up to £4,000. If the land is purchased for cash, the applicant for a closer settlement purchase pays therefor at the ordinary rate, but if payment for the land is made in debentures, the deposit and annual instalments are 1½ per cent. in advance of the rate of interest paid by the Crown, and the interest on the unpaid balance of the purchase money is ½ per cent. in advance of the rate of interest paid by the Crown as aforesaid. Any one or more discharged soldiers or sailors may also enter into agreements to purchase on present title basis a conditional purchase, a conditional purchase lease, a conditional purchase and conditional lease, a homestead selection, a homestead farm, a settlement lease, a Crown lease, an improvement lease or scrub lease, not substantially of a greater area than is sufficient for the maintenance of a home. The vendor is paid by the Crown as heretofore, but the transfer is made direct to the purchaser.

(iv) *Areas Acquired and Disposed of.* Up to the 30th June, 1925, 1,844 estates had been opened for closer settlement.

The number of farms allotted under the Promotion Section of the Closer Settlement Act to date is 3,731, the area 1,774,920 acres, and the amount advanced £8,254,009.

The following statement gives particulars of the aggregate areas opened up to the 30th June in each year from 1921 to 1925 :—

CLOSER SETTLEMENT AREAS (a).—NEW SOUTH WALES, 1920-21 TO 1924-25.

Year ended 30th June—	Areas.			Capital Values.		
	Acquired Lands.	Adjoining Crown Lands.	Total.	Acquired Lands.	Adjoining Crown Lands.	Total.
	Acres.	Acres.	Acres.	£	£	£
1921	3,122,415	94,881	3,217,296	11,010,116	176,164	11,186,280
1922	3,454,422	94,881	3,549,303	13,006,776	176,164	13,182,940
1923	3,783,204	96,958	3,880,162	13,670,070	183,223	13,853,293
1924	3,798,493	96,958	3,895,451	13,719,343	183,223	13,902,566
1925	3,819,376	125,062	3,944,438	13,795,172	185,827	13,980,999

(a) Includes 64 long-term leases resumed for closer settlement.

The total area thus set apart has been divided into 7,736 farms, comprising 3,911,366 acres, the remaining area being reserved for public purposes (roads, stock routes, schools, etc.).

The following table gives particulars regarding the disposal of the farms by closer settlement purchase for the years ended the 30th June, 1921 to 1925:—

CLOSER SETTLEMENT ALLOTMENTS.—NEW SOUTH WALES, 1920-21 TO 1924-25.

Year ended 30th June—	Farms Allotted to Date.			Total Amount received in respect of Closer Settlement Farms.
	Number.	Area.	Value.	
	No.	Acres.	£	£
1921	5,933	2,866,636	9,829,075	1,670,995
1922	6,724	3,335,677	11,746,978	2,136,307
1923	6,759	3,380,634	11,903,855	2,538,553
1924	7,585	3,799,132	13,752,891	2,932,033
1925	7,598	3,859,481	13,979,184	3,659,493

2. **Victoria.**—(i) *Acquisition of Land.* For the purposes of closer settlement, the Closer Settlement Board may either by agreement or compulsorily acquire blocks of private land, and may also ratify any agreement made between persons resident in Victoria and an owner of land for the purchase thereof, and dispose of such land under the Closer Settlement Act. The payment for the land is made in Victorian Government stock or debentures.

(ii) *Disposal of Land.* All land acquired under the Closer Settlement Act is disposed of as conditional purchase leases, which are of three kinds:—(*a*) Farm allotments, each of which must not exceed £2,500 in value; (*b*) workmen's homes allotments, not exceeding £250 in value; and (*c*) agricultural labourers' allotments, not exceeding £350 in value. Land for public purposes may be sold in fee-simple. Land in irrigation districts is also disposed of under the Closer Settlement Act by the State Rivers and Water Supply Commission.

(iii) *Sales of Land.* Land for public purposes may be sold in fee-simple, at a price fixed by the Board, but the area of each site must not exceed 1 acre for a church or public hall, 2 acres for a butter factory or creamery, 5 acres for a school, packing-shed, cool stores, fruit works, or cemetery, or 15 acres for a quarry or recreation reserve.

(iv) *Conditional Purchase Leases.* A conditional purchase lease is for such a term of years as may be agreed upon between the lessee and the Board, and provides for the payment of the value of the land, with interest at not less than 4½ per cent., in not more than 73 half-yearly instalments. The principal conditions under which a lease is held are as follows:—(*a*) Noxious animals and weeds must be destroyed within 3 years; (*b*) the land must be fenced in within one year; (*c*) personal residence during 8 months of each year or residence by an approved deputy for the first 5 years is necessary; (*d*) improvements must be effected to the value of 2 instalments during the first year, to the value of 10 per cent. of the purchase money before the end of the third year, and to a further 10 per cent. before the end of the sixth year, or, if the residence condition is fulfilled by deputy, to the value of 10 per cent. of the purchase money during the first year, and to the value of 30 per cent. before the end of the sixth year; (*e*) on a workman's home allotment, a dwelling house of the value of at least £50 must be erected within one year and additional improvements to the value of £25 within 2 years; and (*f*) on an agricultural labourer's allotment, a dwelling house of the value of at least £30 must be erected within one year. After a period of 12 years, provided that all conditions are complied with and the full purchase-money is paid, a Crown grant may be issued.

(v) *Conditional Purchase Leases in Mountainous Areas.* In mountainous areas, the Minister may direct that no instalments of purchase-money and interest need be paid for a period not exceeding 10 years, and the term of the lease is extended accordingly. Interest at the rate of 5 per cent. for the free period is added to the capital value. During each year of such period, the lessee must reduce at least one-tenth part of the allotment to a state of clear grass or cultivation.

(vi) *Areas acquired and made available for Closer Settlement.* The following statement shows the operations under the provisions of the Closer Settlement Acts up to the 30th June, 1920 to 1924 :—

CLOSER SETTLEMENT.—VICTORIA, 1919-20 TO 1923-24.

(INCLUDING IRRIGATED AREAS.)

Year ended 30th June.	Total Area Acquired by Government to Date.	Total Cost to Date.	How Made Available for Settlement.					Number of Applications Granted to Date.	Total Receipts to Date.	Repayments of Principal to Date.	Area Available for Settlement.
			Farm Allotments.	Workmen's Homes Allotments.	Agricultural Labourers' Allotments.	Town Allotments. (a)	Roads and Reserves.				
	Acres.	£	Acres.	Acres.	Acres.	Acres.	Acres.	No.	£	£	Acres.
1920	573,730	4,269,050	528,502	784	4,470	34,400	4,499	4,469	2,690,934	851,888	21,069
1921	575,900	4,298,765	524,369	784	4,446	41,830	4,471	4,490	3,183,045	992,920	10,979
1922	582,870	4,346,383	530,383	784	3,966	43,320	4,417	4,534	4,454,582	1,098,296	7,922
1923	737,882	5,299,035	670,956	784	3,788	43,236	4,990	4,758	4,794,908	1,202,777	99,573
1924	849,682	6,377,166	770,374	784	3,675	49,900	5,016	5,284	5,193,488	1,347,232	47,547

(*a*) Includes all land sold other than under Conditional Purchase Lease.

3. **Queensland.**—(i) *Acquisition of Land.* The Minister, with the approval of the Governor in Council, may acquire for the Crown, either by agreement or compulsorily, private land in any part of Queensland. The purchase-money may be paid either in cash, or, at the option of the Minister and with the consent of the owner of the land, wholly or in part by debentures. Not more than £500,000 may be expended in any one financial year in purchasing land. The land so acquired may be disposed of as perpetual leases only.

(ii) *Perpetual Lease Selections.* These leases are subject to the same conditions as similar leases under the Land Act. The capital value is fixed by the Governor in Council, but must not be less than the price actually paid for the land with 10 per cent. added thereto. The annual rent for the first 15 years is determined by the Minister, but must not exceed the rate paid by the Crown as interest on the purchase-money for the particular estate of which the land forms part, and for each subsequent period of 15 years by the Land Court at a sum equal to 5 per cent. of the unimproved capital value.

(iii) *Settlement Farm Leases.*—The maximum area allowed to any one person is 3,840 acres. The term of the lease must not exceed 28 years, divided into periods of 7 years. The annual rent for the first period is as stated in the opening notification, and rent for each subsequent period is determined by the Land Court. The lease must be enclosed within 3 years with a good and substantial stock-proof fence, rabbit-proof fence, marsupial-proof fence or fence which is both marsupial-proof and rabbit-proof. Conditions for the destruction of noxious weeds, the cultivation of a specified area, or the making of water improvements may also be imposed. A settlement-farm lease is subject to the condition of personal residence during the whole term.

(iv) *Perpetual Town, Suburban, and Country Leases.* Perpetual leases of town, suburban, and country lands may be sold by auction, as is the case under the Land Act, the conditions of tenure being the same, except that the rent for the first 15 years is fixed at 5 per cent. of the upset price or price bid, whichever is the greater, and for further periods of 15 years at 5 per cent. of the unimproved value of the land or of the amount bid at auction, whichever is the greater.

(v) *Areas Acquired and Selected.* The total area acquired to the end of 1925 was 785,311 acres, costing £1,955,061, no fresh purchases having been made since 1916. The following table gives particulars of transactions under the Closer Settlement Act at the end of each of the years 1921 to 1925 :—

CLOSER SETTLEMENT.—QUEENSLAND, 1921 TO 1925.

Particulars.		1921.	1922.	1923.	1924.	1925.
Total area selected	Acres	742,284	744,423	744,719	745,518	747,187
Number of selectors	No.	2,393	2,352	2,398	2,400	2,403
Agricultural farms	No.	2,121	2,112	2,118	2,114	2,108
Unconditional selections ..	No.	257	256	256	256	256
Perpetual lease selections ..	No.	535	556	563	566	575
Prickly-pear selections	No.	4	4	4	4	4
Perpetual lease prickly-pear selections	No.	2	4	3	5	5
Area sold by auction	Acres	12,510	12,541	12,582	12,582	12,582

4. **South Australia.**—(i) *Acquisition of Land.* The Commissioner of Crown Lands may acquire land at a cost of not more than £600,000 in two financial years, either by agreement or compulsorily.

(ii) *Sales by Auction.* Town lands may be sold by auction for cash. Blocks which are unallotted after one year may also be sold by auction, 25 per cent. of the purchase money being paid in cash, and the balance in 5 yearly instalments with interest.

(iii) *Agreements to Purchase.* Land acquired for closer settlement is divided into blocks, but no block may exceed £4,000 in unimproved value unless suitable for pastoral purposes only, in which case the limit is £5,000. The land so divided is open to conditional purchase, the applicant agreeing (*a*) to reside thereon for 9 months in each year ; (*b*) to fence it in within 5 years ; (*c*) to spend thereon in improvements during each of the first 5 years a sum equal to £3 for every £100 of the purchase-money ; and (*d*) to pay for the block either (1) in 35 years, in half-yearly instalments, of which the first ten are to be equal and calculated at the fixed rate on the purchase-price, and each of the subsequent 60 instalments at a rate sufficient to repay during the 35 years the price together with interest at a fixed rate on the balance thereof ; of (2) if the Commissioner so directs, in 64 years in half-yearly instalments, of which the first sixteen are at the rate of £1 11s. 5d. for every £100 of the purchase-money and the remaining instalments calculated at a rate sufficient to repay the price together with interest on the unpaid balance.

(iv) *Miscellaneous Leases.* Any blocks remaining unallotted for one year may be let on miscellaneous lease at a rental and upon such terms as are determined by the Land Board.

(v) *Areas Acquired and Selected.* The following table shows the area of land acquired for the purposes of closer settlement, and the manner in which it has been dealt with for the years ending 30th June, 1921 to 1925 :—

CLOSER SETTLEMENT.—SOUTH AUSTRALIA, 1921 TO 1925.

Year ended 30th June—	Area of Lands Re-purchased.	Agreements with Covenants to Purchase.	Total Area Leased as Homestead Blocks.		Perpetual Leases.	Miscellaneous Leases.	Sold.	Remainder Un-occupied (including Roads).
			Right of Purchase.	Perpetual Lease.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1921 ..	783,863	519,474	496	1,412	46,475	144	167,211	48,651
1922 ..	783,863	513,118	492	1,327	45,932	144	176,441	46,409
1923 ..	729,141	513,241	473	1,342	50,103	144	127,012	36,826
1924 ..	729,141	509,040	440	1,342	50,208	171	137,934	30,006
1925 ..	735,703	501,319	408	1,291	46,118	171	149,971	36,425

The total area repurchased at 30th June, 1925, was 735,703 acres. The purchase money was £2,421,131. Of the total area, 699,607 acres had been allotted to 2,851 persons, the average area to each being 245 acres.

5. **Western Australia.**—(i) *Acquisition of Land.* Under the Agricultural Lands Purchase Act the Minister may purchase any land which an owner may offer to surrender at a price to be named in the offer, provided that such land is situated within 20 miles of an existing railway, or of one the construction of which is authorized by Parliament. Not more than £1,200,000 may be thus spent. The Minister may also improve any such acquired land prior to disposing of it, and the cost of such improvements must be added to the price at which it is sold to the selector.

(ii) *Disposal of Land.* Land acquired for closer settlement may be disposed of either as town and suburban areas, or under conditional purchase.

(iii) *Conditional Purchases.* Such land as is not reserved for roads, reserves, town and suburban areas, etc., is thrown open for selection under conditional purchase. The selling price is ascertained by adding to the price actually paid for the land 5 per cent. thereof and the cost of all improvements thereon, as well as the cost of subdivision and survey-fee. Payment is to be made in half-yearly instalments extending over a period not exceeding 30 years. The maximum area which may be held by one person is 1,000 acres of cultivable land, or 2,500 acres of grazing land. In other respects the conditions are the same as those for ordinary conditional purchases.

(iv) *Town and Suburban Areas.* The Minister may dispose of town and suburban lands in the same manner as they may be disposed of under the Land Act.

(v) *Areas Acquired and Selected.* There has been no purchase of land for closer settlement purposes for several years, the total area acquired up to the 30th June, 1925, being 461,959 acres, costing £484,411. Of this area 14,727 acres have been set aside for roads, reserves, etc., leaving a balance of 447,232 acres available for selection. The following table gives particulars of operations under the Act for the years ending 30th June, 1921 to 1925 :—

CLOSER SETTLEMENT.—WESTERN AUSTRALIA, 1920-21 TO 1924-25.

Particulars.		1920–21.	1921–22.	1922-23.	1923–24.	1924–25.
Area selected during the year	Acres	8,979	11,193	44,866	..	..
Total area occupied to date	Acres	343,237	351,282	396,148	396,148	375,798
Balance available for selection	Acres	87,742	79,697	73,657	73,657	71,434
Total Revenue ..	£	382,202	400,563	433,805	412,872	437,593

6. **Tasmania.**—(i) *Acquisition of Land.* The Minister may either purchase by agreement and acquire for the Crown private land or compulsorily acquire and take for the Crown blocks of private land. Land may be acquired only when the unimproved value thereof exceeds £12,000. Land may also be acquired by agreement when three or more persons are desirous of obtaining private land belonging to the same owner. Payment may be made in cash, or in debentures or stock bearing interest at 4½ per cent., or partly in debentures or stock at the option of the owner and with the consent of the Minister. Not more than £100,000 may be raised annually for closer settlement purposes, and the total amount borrowed must not exceed £500,000. Land so acquired may be disposed of either by leases with right of purchase or by special sales.

(ii) *Leases with Right of Purchase.* Land acquired under the Closer Settlement Act is thrown open to be leased for a term of 99 years, with the condition that the lessee has the right to purchase the same after ten years, provided that he does not own land (exclusive of the lease) of a value exceeding £1,500, exclusive of buildings, and has complied with all the following conditions :—(*a*) The land must be improved to the value of 2½ per cent. of the capital value in each of the first 10 years ; (*b*) the lessee himself, or his wife, or child over 18 years of age must reside on the lease within 2 years, for 8 months in each of the following 8 years, and the lessee may not transfer, mortgage or sublet his lease without the approval of the Minister; and (*c*) prescribed conditions relating to mining and cultivation, the destruction of pests and noxious weeds, etc., must be complied with. Under ordinary circumstances no allotment may exceed £1,500 in value, exclusive of any buildings thereon, but the Minister may increase the value up to £4,000.

(iii) *Special Sales.* The Minister may sell land in fee-simple as sites for (*a*) churches or public halls, not exceeding 1 acre; or (*b*) dairy factories, fruit-preserving factories, mills, or creameries, not exceeding 5 acres. The price of such land must not be less than the cost thereof, and must be paid in cash. The Minister may also reserve an area up to 100 acres in extent for township purposes, and sell blocks thereof for cash or on credit under the same conditions as those contained in the Crown Lands Act. Land not suitable for disposal by way of lease may be sold in fee-simple either by auction or by private contract.

(iv) *Areas Acquired and Selected.* Up to the 30th June, 1925, 34 areas had been opened up for closer settlement. The total purchase money paid by the Government was £365,148, and the total area acquired amounted to 100,727 acres, including 11,477 acres of Crown land. Particulars for the years 1921 to 1925 are given in the following statement :—

CLOSER SETTLEMENT.—TASMANIA, 1921 TO 1925.

Year ended 30th June—	Number of Farms made Available.	Number of Farms Allotted.	Area of Farms Allotted.	Rental of Farms Allotted.	Total Area Purchased.
	No.	No.	Acres.	£	Acres.
1921	6	6	11,113	786	11,113
1922	..	..	..	..	3,618
1923	..	3	685	..	810
1924	..	..	..	..	..
1925	19	19	1,845	826	..

7. **Summary.**—The following table gives particulars of operations under the Closer Settlement Acts at the 30th June, 1925 :—

CLOSER SETTLEMENT.—TOTAL AREAS ACQUIRED AND ALLOTTED AT 30th JUNE, 1925.

Particulars.		N.S.W.	Victoria. (*a*)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Area acquired ..	acres	3,819,376	849,682	785,311	735,703	461,959	100,727	6,752,758
Purchase price	£	13,795,172	6,377,176	1,955,061	2,421,131	484,411	365,148	25,398,099
Farms, etc., allotted	No.	7,598	5,871	2,403	2,851	1,133	303	20,159
	acres	3,859,481	777,186	747,187	699,607	396,148	83,442	6,563,051

(*a*) Year ended 30th June, 1924.

The next table shows the areas of private lands acquired at the end of each financial year from 1921 to 1925 :—

CLOSER SETTLEMENT.—AREAS OF PRIVATE LANDS ACQUIRED, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria. (*d*)	Q'land. (*c*)	S. Aust.	W. Aust.	Tasmania.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1921 ..	3,122,415	572,262	785,311	726,283	446,804	84,053(*a*)	5,737,128
1922 ..	3,454,422	579,010	785,311	726,283	446,804	99,917(*b*)	6,091,747
1923 ..	3,783,204	737,882	785,311	729,141	446,804	100,727(*b*)	6,583,069
1924 ..	3,798,493	849,682	785,311	729,141	446,804	100,727(*b*)	6,710.158
1925 ..	3,819,376	849,682	785,311	735,703	461,959	100,727(*b*)	6,752,758

(*a*) Including 10,382 acres of Crown lands. (*b*) Including 11,477 acres of Crown lands.
(*c*) Year ended 31st December. (*d*) Year ended 30th June, 1924.

§ 7. Leases and Licences under Mining Acts.

1. New South Wales.—(i) *Holdings under Miners' Rights.* A holder of a miner's right, costing 5s. annually, is entitled to occupy Crown lands for the purpose of mining thereon. The size of a claim varies according to the nature of the mineral worked and the distance from existing workings. The principal condition of tenure is that work must be continuously carried on, unless exemption is granted. A holder of a miner's right may obtain an authority to enter and prospect on certain private lands Water rights, machinery areas, and similar holdings may also be taken up under a miner's right.

(ii) *Gold-mining Leases.* A gold-mining lease is issued for a term not exceeding 20 years, with right of renewal for another 20 years. The maximum area granted is 25 acres, and the annual rent is 2s. per acre. A royalty of 1 per cent. of the value of all gold and minerals won must be paid to the State. Labour must be constantly employed —unless exemption is granted—at the rate of one man to every 5 acres during the first year of the lease, and thereafter one man to every 2 acres.

(iii) *Mineral Leases.* The maximum area which may be leased for mining for other than gold, coal, or oil is 80 acres. The rental and royalty are the same as for a gold-mining lease, but the labour conditions are one man to every 20 acres during the first year and one man to every 10 acres thereafter.

(iv) *Coal and Oil-mining Leases.* The term of a lease for coal or oil-mining is 20 years, the maximum area 640 acres, the rental 2s. per acre, and the royalty 6d. per ton on all coal or shale won, and 1 per cent. of the value of all oil won. Two men must be employed to each area of 320 acres.

(v) *Business Licences.* A business licence, issued at an annual fee of £1, entitles the holder to occupy for the purpose of carrying on business not more than ¼ acre in a town or village, or 1 acre outside, on any gold or mineral field. No person may hold more than one area.

(vi) *Residence Areas.* A holder of a miner's right may occupy as a residence area not more than ¼ acre in a town or village, or 2 acres outside, on any gold or mineral field. Improvements to the value of £10 must be effected thereon, and no person may hold more than one area.

(vii) *Areas Occupied under Mining Acts.* The following table gives particulars of operations for the years 1921 to 1925. Of the 4,669 acres leased for gold-mining, 240 acres were leased for dredging for gold.

AREAS TAKEN UP UNDER MINING ACTS.—NEW SOUTH WALES, 1921 TO 1925.

Purposes for which Issued or Occupied.	1921.	1922.	1923.	1924.	1925.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	3,120	3,187	3,088	1,250	4,669
Mining for other minerals ..	21,759	11,358	22,280	19,792	74,179
Authorities to prospect ..	3,487	1,714	14,241	6,968	19,629
Other purposes	379	513	534	482	1,336
Total	28,745	16,772	40,143	28,492	99,813
TOTAL AREAS OCCUPIED AT END OF YEAR.					
Gold-mining	9,061	10,870	10,428	8,171	10,780
Mining for other minerals ..	248,568	263,227	280,756	281,751	349,744
Authorities to prospect ..	5,224	866	9,179	2,461	21,347
Other purposes	5,998	6,540	6,973	7,305	8,322
Total	268,851	281,503	307,336	299,688	390,193

2. Victoria.—(i) *Holdings under Miners' Rights.* Under a miner's right costing 2s. 6d. annually, a miner may take up a claim on Crown lands, the area of which varies according to the nature of the ground and whether gold or minerals are to be won, conditionally on such claim being worked continuously, unless exemption is granted. Under the same tenure water rights, machinery areas, etc., may be obtained.

(ii) *Gold-mining Leases.* A gold-mining lease is granted for a period not exceeding 15 years, renewable for a further 15 years, but no maximum area is prescribed. The rent is 2s. 6d. per acre per annum, and the labour conditions are as specified in the lease; but, under certain circumstances, the expenditure of a specified amount of money may be substituted for the labour conditions.

(iii) *Mineral Leases.* A mineral lease is issued for the same period as a gold-mining lease, at a rental of not less than 1s. nor more than £5 per acre per annum, as the Minister may determine, no royalty being charged except for coal. The area must not exceed 640 acres, and the Minister fixes the amount of labour to be employed.

(iv) *Business Areas.* The holder of a business licence is entitled to occupy ¼ acre of Crown lands in a city or town, or ½ acre in a borough, or 1 acre outside, for the purpose of residence and carrying on his business. A business licence costs 10s. a year in a city. town, or borough, or 5s. outside, together with 5 per cent. of the value of the land. A business area must be continuously occupied, unless exemption is obtained.

(v) *Residence Areas.*—The holder of a miner's right may occupy a residence area of the same dimensions as a business area under the same conditions of occupation, but no further payment than the cost (2s. 6d.) of the miner's right is required.

(vi) *Leases and Licences Issued.* During the year 1925, leases, licences, etc., were issued covering an area of 4,832 acres, the rent, fees, etc., for which amounted to £830. The following table gives particulars of operations for the years 1921 to 1925:—

AREAS TAKEN UP UNDER MINING ACTS.—VICTORIA, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
	Acres.	Acres.	Acres.	Acres.	Acres.
Area taken up during year ..	10,696	6,699	9,207	8,247	4,832
Area occupied at end of year ..	52,892	49,178	47,361	43,216	41,765

3. Queensland.—(i) *Holdings under Miners' Rights.* The holder of a miner's right, costing 5s. a year, may take up a prospecting area or a claim, the areas of which vary according to the nature of the mineral sought for or worked, and the distance from existing workings. Such land must be worked continuously, unless exemption is granted. A holder of a miner's right is also entitled to cut races, reside on Crown land, cut timber thereon, etc.

(ii) *Permits to Prospect for Petroleum.* Any person may apply for a permit to prospect for petroleum. An area not exceeding 10,000 acres is allowed for a period of 2 years, and not more than two such permits may be held at the one time. A preferential right to a permit may be obtained for a period of 30 days by erecting a post or monument on the land and posting a notice in accordance with the Petroleum Act of 1923. A rental of 1d. per acre per annum is payable for the land included in the permit. Within a year the holder of the permit must erect an adequate drilling outfit on the land and commence drilling, and within 2 years drill at least 2,000 feet.

(iii) *Licences to Prospect for Coal or Mineral Oil.* Any person may apply for a licence for one year to prospect Crown land for coal or mineral oil. An area of 2,560 acres at a rental of 1d. per acre is allowed. The licence may be renewed for one year.

(iv) *Gold-mining Leases.* The term of a gold-mining lease is 21 years renewable for a further period of 21 years, and the maximum area is 50 acres, except in the case of a special lease, when 300 acres may be selected. The rent is £1 per acre per annum. One man must be kept constantly employed for every 4 acres, unless exemption is obtained.

(v) *Mineral Leases.* The term of a mineral lease is the same as that of a gold-mining lease, but the maximum area is, in the case of petroleum, one-fourth of the area included in the prospecting permit, with a preferential right to a further lease or leases of the balance of the area; 320 acres for mineral oil; 640 acres for coal; and 160 acres for other minerals. The annual rent per acre is (*a*) 1s. for coal and mineral oil, (*b*) 2s. for the first 2,500 acres and 4s. for the balance in the case of petroleum, and (*c*) 10s. for other minerals. The labour conditions are:—(*a*) For coal, one man for every 40 acres during the first 2 years, then one man for every 20 acres, or, alternatively, an expenditure during each half-year of £100 for every 40 and 20 acres respectively; (*b*) for petroleum, the installation of a drilling plant within 3 months, and the drilling of wells one at a time until a well has been drilled for every 100 acres; and (*c*) for other minerals, one man for every 10 acres. A royalty is payable of from 4d. to 1s. per ton on all coal raised, and of 12½ per cent. of the value of all petroleum won, there being no royalty on other minerals.

(vi) *Business Areas.* The holder of a business licence, the fee for which is £2 a year, may occupy ½ acre of land on a gold or mineral field for the purpose of carrying on a business, and must occupy the same continuously, but is entitled to obtain exemption from occupation after having expended the sum of £10 on improvements. No person may occupy more than one area with one licence.

(vii) *Residence Areas.* The holder of a miner's right may take up a residence area of ¼ acre on a gold or mineral field, but may hold only one such area on the same field. Occupation is necessary in order to hold the ground, but exemption can be obtained under certain circumstances.

(viii) *Miners' Homestead Perpetual Leases.* A person, resident on a mining field, and otherwise qualified, also any corporate body carrying on business on the field, may take up a lease or leases not exceeding in area (*a*) 1 acre in a city, town, or township; or (*b*) 20 acres within 1 mile of a city, town, or township; or (*c*) from 80 to 640 acres outside such limits. The rent in the case of a lease sold at auction is 3 per cent. of the purchase price, and in other cases 1½ per cent. of the notified capital value of the land. The land is subject to re-appraisement every 10 years. The title is a lease in perpetuity and the land must be occupied and improved.

(ix) *Areas held under Lease or Licence.* During the year 1925 the number of miners' rights issued was 3,764, and of business licences 14. The following table gives particulars regarding the areas of land taken up under lease or licence, and the total areas occupied for the years 1921 to 1925. In addition, an area estimated at 9,000 acres was at the end of 1925 held under miners' rights.

AREAS TAKEN UP UNDER MINING ACTS.—QUEENSLAND, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	61	354	253	225	56
Mining for other minerals ..	953	597	5,560	6,694	4,390
Coal-prospecting licences ..	63,217	26,425	21,202	8,276	7,961
Miners' homestead leases ..	33,469	31,019	8,679	8,329	6,212
Mineral oil-prospecting areas	..	1,280	4,160	2,000	4,340
Petroleum prospecting areas	..	118,525	25,900	90,000	29,200
Total	97,700	178,200	65,754	115,524	52,159

AREAS TAKEN UP UNDER MINING ACTS.—QUEENSLAND, 1921 TO 1925—*continued.*

Particulars.	1921.	1922.	1923.	1924.	1925.
TOTAL AREAS OCCUPIED AT END OF YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	1,620	1,313	1,279	1,191	925
Mining for other minerals ..	33,370	30,954	22,012	28,753	31,306
Coal-prospecting licences ..	63,217	26,425	21,202	8,276	7,961
Miners' homestead leases ..	314,161	322,640	329,453	335,133	339,998
Mineral oil-prospecting areas	..	1,280	4,160	2,000	4,340
Petroleum-prospecting areas	..	118,525	66,480	123,705	71,200
Total	412,368	501,137	444,586	499,058	455,730

4. **South Australia.**—(i) *Holdings under Miners' Rights.* A miner's right costs 5s. per annum, and entitles the holder to take up a prospecting claim, a mining claim, a machinery area, a water right, etc. He is also entitled to take up a lease for mining purposes for a term not exceeding 21 years. The area of an alluvial gold claim is 100 feet by 100 feet, of a reef gold claim 330 feet by 660 feet, of a precious stones claim 150 feet by 150 feet, and of a mineral claim 40 acres. A gold or precious stones claim must be constantly worked by one man, a mineral claim by one man for each 20 acres, and a coal or oil claim by eight men.

(ii) *Search Licences.* A search licence may be issued to the holder of a miner's right entitling him to search on any specified mineral lands, not exceeding 5 square miles in area, for precious stones, mineral phosphates, oil, or rare minerals, which have hitherto not proved payable. The licence is in force for 12 months, and the fee is £1 for every square mile. One man at least must be employed for every 640 acres. A licensee has a preferential right to a mineral lease of 40 acres for rare metals, of 100 acres for mineral phosphates, and of 640 acres for oil, or to a precious stones claim of 150 feet by 150 feet.

(iii) *Gold Leases.* A gold lease must not exceed 20 acres in area. The rent is 1s. per acre per annum, and a royalty of 6d. in the pound of the net profits must be paid. The labour conditions are 1 man to every 5 acres. For gold dredging, the maximum area allowed is 200 acres.

(iv) *Mineral Leases.* The maximum areas which may be taken up as mineral leases are for (*a*) coal, oil, salt, and gypsum, 640 acres; (*b*) mineral phosphates, 100 acres; and (*c*) other minerals, 40 acres. The annual rent per acre is for (*a*) coal or oil, 6d., until a marketable quantity is produced, then 1s.; and for (*b*) other minerals, 1s., except that a higher rent may be charged for salt or gypsum. A royalty of 6d. in the £ of the net profits is payable in the case of all minerals. The labour conditions vary according to the class of mineral won, being (*a*) for coal and oil, 1 man to every 40 acres; (*b*) for barytes, ochre, etc., 1 man for 3 months in each year; (*c*) for gypsum, 2 men for every 40 acres; (*d*) for salt, 1 man for every 40 acres from January to April; and (*e*) for other minerals, 1 man to every 10 acres.

(v) *Business Areas.* Any person may, on payment of £1 per annum, obtain a business licence entitling him to occupy a business claim of ¼ acre in a township, or of 1 acre elsewhere, but no person may own or occupy more than one such claim, and business must be continuously carried on thereon.

(vi) *Residence Areas.* The owner of a claim, while actively engaged in prospecting or mining thereon, may occupy a residence site not exceeding ¼ acre on Crown lands, but, in order to hold the same, must reside thereon.

(vii) *Occupation Licences.* Any person may be granted an occupation licence authorizing him to occupy for the purpose of residence and cultivation ½ acre of Crown lands at a rental of not less than 2s. per annum. Such licence is in force for 14 years, and may be renewed from time to time until the land is required for public purposes.

(viii) *Areas Occupied under Mining Acts.* The following table gives particulars of operations for the years 1921 to 1925:—

AREAS TAKEN UP UNDER MINING ACTS.—SOUTH AUSTRALIA, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining leases	130	127	240	269	101
Mineral and miscellaneous leases	5,617	5,120	2,589	5,766	4,834
Claims	52,164	34,827	36,026	32,019	11,170
Search licences	515,840	397,440	571,520	473,600	295,040
Occupation licences ..	5	5	2	2	3
Total	573,756	437,519	610,377	511,656	311,148
TOTAL AREAS OCCUPIED AT END OF YEAR.					
Gold-mining leases	765	827	905	840	568
Mineral and miscellaneous leases	55,882	58,682	55,505	57,959	42,168
Claims	69,982	55,791	62,995	61,853	35,548
Search licences	515,840	397,440	534,400	465,280	290,560
Occupation licences ..	101	101	94	93	78
Total	642,570	512,841	653,899	586,025	368,922

5. **Western Australia.**—(i) *Holdings under Miners' Rights.* A miner's right, costing 5s. a year, entitles the holder to take up a prospecting area or a claim and occupy Crown land for mining purposes or as an authorized holding. He may also construct water-races, dams, tramways, etc. Prospecting areas and claims are of various dimensions, and are held conditionally on being worked continuously.

(ii) *Gold Mining Leases.* A gold mining lease is granted for a period of 21 years, with the right of renewal for a further 21 years, and may contain an area of 24 acres. The rental is 5s. per acre for the first year, and £1 per acre for subsequent years. If the ground has been previously worked and abandoned, a lease may contain 48 acres, and the annual rent be not less than 5s. per acre nor more than £1 per acre. In the former case, not less than 2 men must be employed during the first 12 months, and then 1 man for every 6 acres, and in the latter case 1 man for every 12 acres.

(iii) *Mineral Leases.* The term of a mineral lease is 21 years, renewable for a similar period, and the maximum area allowed is (*a*) for coal, 320 acres, or for the holder of a prospecting area, 640 acres; (*b*) for oil, 48 acres for an ordinary lease, and 640 acres for a reward lease; (*c*) for precious stones, 24 acres; and (*d*) for other minerals, ordinary lease, 48 acres, and lease on abandoned ground, 96 acres. The annual rental per acre is for (*a*) 6d.; (*b*) ordinary lease, 6d., reward lease, a peppercorn for the first 5 years; and (*c*) and (*d*) ordinary lease, 5s., and extended lease not less than 2s. as the Governor may determine. A royalty of 3d. per ton during the first 10 years and of 6d. per ton for the balance of the lease is payable in the case of coal, and, in the case of oil, the royalty is 10 per cent. of the gross value of the output. The labour conditions are for coal and oil, during the first year, 1 man; during the second year, 2 men; and thereafter 3 men for every 60 acres; and for other minerals, 2 men for the first year, and then 1 man for every 6 acres of an ordinary lease, and for every 12 acres of an extended lease.

(iv) *Business Areas.* A holder of a miner's right may take up a business area not exceeding 1 acre in extent, and must occupy the same for carrying on business, but he may obtain exemption from occupation for 6 months, provided that he has effected improvements thereon to the value of £50.

(v) *Residence Areas.* Provided that he occupies the same, a residence area of ¼ acre may be held by the holder of a miner's right. After expending £10 on improvements he may obtain exemption from residence for 6 months.

(vi) *Miners' Homestead Leases.* A miner, resident on a gold or mineral field, may be granted a miner's homestead lease not exceeding (*a*) 20 acres, if within 2 miles of the nearest boundary of any township or suburban area; or (*b*) 500 acres if beyond, at an annual rental, for the first 20 years, of (*a*) 2s. per acre, where the area does not exceed 20 acres; and (*b*) 6d. per acre where such area is exceeded, and thereafter 1s. if demanded. Within 3 years the lessee must fence in the land, and within 5 years must improve it to the value of 10s. per acre.

(vii) *Particulars of Areas Occupied.* The following table gives particulars of operations for the years 1921 to 1925, the figures being exclusive of holdings under miners' rights and mineral oil-licences. Of the areas shown as taken up in 1925, the area under lease was 1,360 acres for gold-mining, 590 for mining for other minerals, and 351 for miners' homesteads—a total of 2,301 acres. The balance was taken up under licences.

AREAS TAKEN UP UNDER MINING ACTS.—WESTERN AUSTRALIA, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	17,291	17,836	21,722	14,303	12,173
Mining for other minerals ..	73,561	42,509	15,772	11,673	27,994
Other purposes	2,181	1,537	73	311	397
Total	93,033	61,882	37,567	26,287	40,564
TOTAL AREAS OCCUPIED AT END OF YEAR.					
Gold-mining	21,600	25,011	24,574	17,759	15,409
Mining for other minerals ..	101,322	78,073	66,036	38,006	73,519
Other purposes	38,397	37,896	37,219	34,783	34,035
Total	161,319	140,980	127,829	90,548	122,963

6. Tasmania.—(i) *Holdings under Miners' Rights.* A miner's right is issued to any person at a fee of 5s. for a year, expiring on the 31st December next after the date of issue, and entitles the holder to take possession of Crown land and to mine thereon, also to construct water-races, build a residence thereon, etc. An ordinary claim for a single holder contains ½ acre.

(ii) *Prospectors' Licences.* A prospector's licence, issued at a fee of 10s. for a year ending on the 31st December, empowers the licensee to take up a claim for the purpose of prospecting for gold and minerals. Such claim may be an ordinary claim with an area of up to 40 acres, or an extended claim up to 320 acres, and both must be worked continuously.

(iii) *Gold-mining Leases.* Any person may be granted a gold-mining lease of any Crown land for a period of 21 years, renewable for a further 21 years. Reward leases may be granted to discoverers of gold, and, under certain circumstances, special leases may be issued. The maximum area allowed is 40 acres, and the rent is 10s. per acre per annum. At least £2 per acre must be expended annually in mining operations or in works connected therewith.

(iv) *Mineral Leases.* Mineral leases are also issued for a period of 21 years, renewable as in the case of gold-mining leases. The maximum area is—(*a*) for coal or oil, 640 acres; and (*b*) for other minerals, 80 acres. The annual rent per acre is—(*a*) for oil, 1s.; (*b*) for coal, 2s. 6d.; and (*c*) for other minerals, 5s. At least £2 per acre must be expended annually. No royalty is charged, except on oil, for which it is fixed at 5 per cent. of the gross value of all crude oil obtained after the first 50,000 gallons.

(v) *Leases and Licences Issued and Areas Occupied.* During the year 1925, the number of leases issued was 383, of which the more important were 47 for gold mining, covering 820 acres; 145 for tin, covering 4,007 acres; and 16 for iron, covering 354 acres. Sixteen licences to search for coal and oil were also granted. The following table gives particulars of operations for the years 1921 to 1925:—

AREAS TAKEN UP UNDER MINING ACTS.—TASMANIA, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	530	794	1,074	1,094	947
Mining for other minerals ..	10,862	4,309	12,884	11,362	8,911
Licences to search for coal or oil	122,611	25,481	33,473	21,120	13 910
Other purposes	236	186	104	196	414
Total	134,239	30,770	47,535	33,772	24,182
TOTAL AREAS OCCUPIED AT END OF YEAR.					
Gold-mining	1,894	2,424	1,687	1,829	1,340
Mining for other minerals ..	47,562	43,667	37,662	32,498	33,695
Licences to search for coal or oil	117,031	137,692	34,761	39,168	14,130
Other purposes	3,020	3,732	3,517	2,697	2,868
Total	169,507	187,515	77,627	76,192	52,033

7. **Northern Territory.**—(i) *General.* Mining generally is governed by the Northern Territory Mining Act passed by the South Australian Legislature in 1903, but special Ordinances have since been promulgated by the Commonwealth respecting tin dredging and mining for mineral oil and coal.

(ii) *Holdings under Miners' Rights.* The fee for a miner's right is 5s. for 12 months from the date of issue, and a holder thereof is entitled to occupy Crown lands for mining purposes, to construct races, to divert water, to reside on his holding, etc.

(iii) *Gold-mining Leases.* The area of a gold-mining lease must not exceed 40 acres, and the term is 42 years, renewable for a further 21 years. The rent must not be less than 1s. per acre per annum. A royalty of 6d. in the £ of the net profits must be paid, and one man must be kept constantly employed for every 10 acres, unless exemption is obtained.

(iv) *Mineral Leases.* Mineral leases may be granted in blocks not exceeding 80 acres each, but no person may hold more than 640 acres altogether, nor more than 320 acres in contiguous blocks. A mineral lease is issued for a term not exceeding 99 years, and the rent and royalty are the same as in the case of a gold-mining lease. One man for every 20 acres must be constantly employed during 9 months in each year.

(v) *Tin-dredging Leases.* These leases are issued for a term not exceeding 21 years at a rental of 1s. per acre per annum. The area must not exceed 1,000 acres, and the lessee must, after the first 12 months, keep continuously employed thereon either (*a*) not less than 1 man of European race or extraction for every 25 acres; or alternatively (*b*) fully-manned machinery of a value of not less than £500 for every 100 acres.

(vi) *Mineral Oil and Coal Licences.* A licence to search for mineral oil or coal, or for both, may be granted over an area not exceeding 1,000 square miles for a period of 5 years on payment of an annual fee of £10. At least 4 white men must be employed for not less than 6 months in each year. A holder of a mineral oil licence who discovers payable mineral oil on the land held under his licence has a preferential right to a mineral oil lease of 160 acres, together with a reward area of 640 acres thereon. A discoverer of coal in payable quantities has a preferential right to an area of 640 acres as a coal lease.

(vii) *Mineral Oil and Coal Leases.* Leases may be granted for a period of 21 years, renewable for a further 21 years, for mining for mineral oil or coal, the maximum areas being (*a*) for mineral oil, 160 acres; and (*b*) for coal, 640 acres. In the case of mineral oil, the annual rent is 1s. per acre, and a royalty of 5 per cent. on the gross value of all crude oil obtained is payable; the lessee must also work the land to the satisfaction of the Minister. In the case of coal, the rent and conditions are fixed by regulation.

(viii) *Business Licences.* A business licence is issued at the prescribed fee, and authorizes the holder to occupy on a gold-field, for the purpose of residence and carrying on his business, so much Crown land as is fixed by the Warden who issues the licence.

(ix) *Garden Licences.* The Warden may grant licences to occupy land upon any gold-field or mineral-field to any person for the purpose of growing fruit or other garden produce. The conditions as to rent, etc., are as prescribed, but the area must not exceed 20 acres.

(x) *Areas occupied.* The areas occupied under Mining Acts at the end of 1925 are given on page 161.

8. **Summary.**—The following table shows the areas under leases and licences for mining purposes and the total areas occupied for mining purposes for the years 1921 to 1925:—

CROWN LANDS, LEASES AND LICENCES FOR MINING PURPOSES, 1921 TO 1925.

Year.	N.S.W.	Victoria.	Q'land. (*a*)	S. Aust. (*a*)	W. Aust. (*a*)	Tas. (*a*)	Total.
AREAS FOR WHICH LEASES AND LICENCES ISSUED DURING YEAR.							
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1921 ..	28,745	10,696	97,700	573,756	93,033	134,239	938,169
1922 ..	16,772	6,699	178,200	437,519	61,882	30,770	731,842
1923 ..	40,143	9,207	67,754	610,377	37,567	47,535	812,583
1924 ..	28,492	8,247	115,524	511,656	26,287	33,772	723,978
1925 ..	99,813	4,832	52,159	311,148	40,564	24,182	532,698
TOTAL AREAS OCCUPIED AT END OF YEAR.							
1921 ..	268,851	52,892	412,368	642,570	161,319	169,507	1,707,507
1922 ..	281,503	49,178	501,137	512,841	140,980	187,515	1,673,154
1923 ..	307,336	47,361	444,586	653,899	127,829	77,627	1,658,638
1924 ..	299,688	43,216	499,058	586,025	90,548	76,192	1,594,727
1925 ..	390,193	41,765	455,730	368,922	122,963	52,033	1,431,606

(*a*) Exclusive of lands held under miners' rights only.

Up to the 31st December, 1925, an area of 5,256,246 acres was under mining leases and licences in the Northern Territory, of which 1,846 acres were under lease, and the balance under licence to prospect for oil and coal.

§ 8. Settlement of Returned Soldiers and Sailors.

1. **General.**—Information in regard to the methods adopted in each State for providing land for the settlement of returned soldiers and sailors, together with the conditions under which such land could be acquired, is given in preceding issues of the Official Year Book (see No. 18, pp. 187–189), but limits of space preclude its repetition herein.

Particulars respecting the position of soldier settlement in each State at the latest available date are, however, given in the sub-sections immediately following.

2. **New South Wales.**—At the 30th June, 1925, the area set apart exclusively for soldiers was 9,189,088 acres, of which 1,855,073 acres comprised acquired land. The number of soldiers allotted farms was 9,098, of whom 2,135 subsequently transferred, forfeited, or surrendered their holdings. The area of the farms held at that date was 8,081,070 acres, of which 6,496,666 acres were Crown lands (including 3,936,898 acres in the Western Division taken up under the Western Lands Act), 1,527,439 acres of acquired lands, and 56,965 acres in the Irrigation Areas.

3. **Victoria.**—At the 30th June, 1924, the area acquired or set apart for soldier settlement was 2,272,350 acres, of which 1,744,111 acres comprised private land purchased at a cost of £13,214,902. The number of farms allotted was 8,640, containing 2,290,489 acres.

4. **Queensland.**—At the 30th June, 1925, the area acquired or set apart for soldier settlement was 664,957 acres, of which 41,101 acres comprised private land, purchased at a cost of £270,480. The number of farms allotted was 1,854, containing 683,992 acres. Some of these selections were acquired under the ordinary provisions of the Land Act, and do not include areas specially set apart for soldiers.

5. **South Australia.**—At the 30th June, 1925, the area acquired or set apart for soldier settlement was 3,022,599 acres, of which 2,349,267 acres comprised private land purchased at a cost of £4,352,572. The number of farms allotted was 3,191, containing 2,833,295 acres.

6. **Western Australia.** —At the 30th June, 1925, the area of land acquired or set apart for soldier settlement was 14,287,643 acres, of which 345,110 acres comprised private land purchased at a cost of £605,076. The number of farms allotted was 1,134, containing 14,287,643 acres. In addition, 3,253 properties with an area of 25,724,900 acres, including pastoral land, were purchased by returned soldiers with the assistance of the Agricultural Bank, which takes a mortgage to cover its expenditure. Assistance was also given to 864 soldier settlers who occupied areas totalling 3,239,400 acres.

7. **Tasmania.**—At the 30th June, 1925, the area acquired or set apart for soldier settlement was 331,539 acres, of which 268,209 acres comprised private land purchased at a cost of £2,010,225. The number of farms allotted was 1,935, containing 271,537 acres.

8. **Summary.**—The following table gives a summary of the area acquired, the purchase price thereof, and the number and area of farms allotted in all the States to the 30th June, 1925 :—

SOLDIER SETTLEMENT.—AREAS ACQUIRED AND ALLOTTED AT 30th JUNE, 1925.

Particulars.		N.S.W.	Victoria.(*a*)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Area acquired or set apart—								
(i) Private land acquired ..	acres	1,855,073	1,744,111	41,101	2,349,267	345,110	268,209	6,602,871
(ii) Crown lands set apart ..	,,	7,333,965	528,239	623,856	668,501	13,942,533	63,330	23,160,424
Farms, etc., allotted	No.	6,317	8,640	1,854	3,191	1,134	1,935	23,071
	acres	8,081,070	2,290,489	683,992	2,833,295	14,287,643	271,537	28,448,026
Price paid by Government for private land acquired ..	£	8,103,943	13,214,902	270,480	4,352,572	605,076	2,010,225	28,557,198

(*a*) Year ended 30th June, 1924.

§ 9. Tenure of Land by Aliens.

Information regarding the terms and conditions under which land can be held by aliens is contained in previous issues of the Official Year Book (see No. 18, pp. 190–1), but limits of space preclude its repetition in the present issue.

§ 10. Advances to Settlers.

1. New South Wales.—(i) *General.* Advances to settlers are effected through the Rural Bank Department of the Government Savings Bank, and may consist of either (*a*) overdraft repayable on demand; or (*b*) long-term loan for a period up to 31 years repayable by equal half-yearly instalments, including principal and interest, on freehold lands or any tenure under the Crown Lands Acts; or (*c*) advances on purchase of farms. Advances for the purchase of wire-netting are made under the provisions of the Pastures Protection Act, advances to soldier settlers under the Returned Soldiers Settlement Acts, and advances for the sinking of shallow bores on irrigation areas are made by the Water Conservation and Irrigation Commission.

(ii) *Government Savings Bank Act.* (*a*) *Loans to Settlers.* Loans by way of overdraft may be made upon any security satisfactory to the Commissioners. The following provisions apply to long-term loans:—(1) no loan may be for a less amount than £50, nor for more than £2,000 to any person; (2) loan up to two-thirds of the sale value of security, freehold or Crown lands, upon which first five years' certificate has issued; (3) loan up to three-fourths of the value of improvements on Crown lands on which the certificate of fulfilment of conditions has not issued, provided that such advance does not exceed two-thirds of the sale value of the security; (4) in the case of Western lands, up to £2,000, provided the amount of the advance, plus the amount owing for improvements, does not exceed 50 per cent. of the sale value of the security. The interest is fixed by the Commissioners according to the rate current at the time.

Under Section 64 of the Bank Act the Commissioners are prepared to consider applications for subdivision of estates into farms and to assist purchasers of such farms up to 80 per cent. of the official valuation with a maximum of £3,000. In other respects the terms and conditions are similar to ordinary loans from the Rural Bank Department, and loans are repayable either (1) in half-yearly instalments of interest and principal extending over 31 years, or (2) at fixed dates.

(*b*) *Advances on Purchase of Farms.* The Commissioners may make advances to assist persons in purchasing lands, provided that the title is either certificated conditional purchase or freehold. The amount of the advance must not exceed 80 per cent. of the Commissioners' valuation of the security, and in other respects these advances are subject to the same provisions as other loans from the Rural Bank Department, but are limited to a maximum of £1,250 in each case.

(iii) *Returned Soldiers' Settlement Act.* Advances up to £625 may be made to returned soldiers for prescribed purposes, principal and interest being repayable on easy terms.

(iv) *Amount of Advances.* The following table gives particulars respecting advances etc., to 30th June, 1925 :—

ADVANCES TO SETTLERS.—NEW SOUTH WALES, 1924-25.

Particulars.	Advances made during 1924–25.	Total Advances at 30th June, 1925.	Amount outstanding at 30th June, 1925.
	£	£	£
Government Savings Bank Advances ..	1,767,762	13,723,713	8,552,592
Soldier Settlement Advances	279,802	6,539,445	5,667,425
Advances for Purchase of Wire Netting	77,778	727,907	278,463
Advances to Necessitous Farmers ..	121,391	2,756,297	351,868
Advances to Civilian Settlers on Irrigation Areas	17,336	419,318	125,157
Shallow Boring Advances	43,241	307,400	134,196
Total	2,307,310	24,474,080	15,109,701

2. **Victoria.**—(i) *General.* The principal institution which advances money to settlers is the State Savings Bank. The Closer Settlement Board is also authorized to make such advances, and the Government may lend money to Cool Stores Trusts, and, under special drought circumstances, make advances to settlers for the purchase of seed, cattle, etc., for which purpose separate Acts have been and are passed from time to time as required.

(ii) *State Savings Bank Act.* The *Crédit Foncier* Department of the State Savings Bank was created for the purpose of making advances to settlers and others, and is authorized to borrow up to £10,000,000 for that object. The Commissioners may lend money to farmers, etc., on the security of any agricultural, horticultural, viticultural, or pastoral land held in fee-simple or on conditional purchase. Such loans are secured by a first mortgage on the property, and are payable either in cash or by debentures or mortgage bonds, at the option of the Commissioners. No advance may be less than £50, or more than £2,000, and each advance is limited to two-thirds, or, in the case of returned soldiers, to three-quarters, of the value of the land, and, in the case of a conditional purchase, this amount is reduced by the amount of rent outstanding. Where improvements are effected on a conditional purchase lease to the amount of £1 per acre at least, and the value of the land and improvements exceeds £2 per acre, an additional advance, not exceeding 15s. per acre, may be made. In the case of land which has acquired a special increase of value by reason of being cultivated as vineyards, hop-grounds, orchards, etc., advances may be made on the following terms :—(*a*) the total amount which may at any time be advanced must not exceed £100,000 ; (*b*) the amount of allowable advance may be increased by one-fourth, but not to a greater amount than £30 per acre ; and (*c*) no advance may be made for a longer period than 15 years. Repayment of advances must be made in 63 half-yearly instalments of principal and interest, a slight reduction in the amount being made in the case of returned soldiers. The Commissioners may also advance money to companies in country districts for the erection of works for freezing, packing, or storing any commodities which are included in the Primary Products Act or in the Fruit Act, provided that shares equal in value to not less than two-thirds of the proposed expenditure have been taken up, and one-third thereof paid for in cash. The loan is granted upon such terms and conditions as the Commissioners may think fit.

(iii) *Closer Settlement Act.* The Closer Settlement Board may advance money to (*a*) lessees of workmen's homes and agricultural labourers' allotments in aid of the cost of fencing and erecting dwelling-houses ; (*b*) lessees of Crown land for carrying on farming or grazing pursuits, or for adding to improvements ; (*c*) municipalities, for making roads to any land acquired by the Board ; and (*d*) owners of land for the purchase of wire-netting. An advance may not exceed £625, or, in the case of land which is suitable mainly for grazing, £1,000, and is repayable in 40 half-yearly instalments, with 5 per cent. interest.

Where a lessee has, after not less than 6 years, obtained his compliance certificate or Crown grant, the amount of loan may be increased to £1,000, but must not exceed 60 per cent. of the value of the improvements and amount of purchase-money paid.

(iv) *Discharged Soldiers' Settlement Act.* The Closer Settlement Board may advance to a discharged soldier up to £625, or, if he is the owner or lessee of land in the mallee country or of grazing land only, up to £1,000. The rate of interest is fixed by the Minister, and is 3½ per cent. for the first year, increasing by ½ per cent. annually until the rate determined is reached. Repayment is as prescribed.

(v) *Primary Products Advances Act.* A company registered under the Companies Act, or a society registered under the Provident Societies Act, which is undertaking the establishment of abattoirs and freezing works, or cool storage for fish, or dried or canned fruit, or jam factories, tobacco-curing, or fruit-works, may be granted by the State Savings Bank a loan for the purpose of constructing such works. No loan may be granted unless at least one-third in number and value of the shareholders are persons engaged in the production of the primary products supplied to the company and full particulars of the proposed undertaking are furnished. The loan is repayable at such times and with such interest as the Commissioners may determine, the property must be mortgaged to the Bank, and a sum, not exceeding 5 per cent. of the value of the buildings, etc., paid annually into a depreciation fund.

(vi) *Fruit Act.* A Cool Stores Trust may be granted a loan by the Treasurer for the purchase of land and for the erection of a cool store thereon. Such loan must be a first charge on the property and revenue of the Trust, be for an agreed term of years, and provide for repayment with interest at 4½ per cent. in 40 half-yearly instalments. The State Savings Bank Commissioners may also advance money to a company for the purpose of constructing fruit-works, provided that at least one-third in number and value of the shares are held *bona fide* by shareholders being owners or occupiers of orchards within the locality. The terms of the loan are the same as those under the Primary Products Advances Act.

(vii) *Amount of Advances.* The following table gives particulars respecting advances etc., to 30th June, 1925 :—

ADVANCES TO SETTLERS.—VICTORIA, 1925.

Authority Making Advances.	Advances made to—	Advances made during 1924–25.	Total Advances at 30th June, 1925.	Amount Outstanding at 30th June, 1925.
		£	£	£
State Savings Bank	Civilians	501,082	6,289,807	2,789,098
	Discharged soldiers ..	90,950	351,120	299,003
Closer Settlement Board	Closer Settlement settlers	1,017,091	7,759,179	5,285,791
	Soldier settlers ..	765,036	21,269,412	18,374,452
Treasurer	Cool stores, canneries, etc.	13,499	605,494	467,524
Total	.. .. ..	2,387,658	36,275,012	27,215,868

3. **Queensland.**—(i) *General.* The principal institution which makes advances to settlers is the Agricultural Bank, established by the Agricultural Bank Act of 1923. Advances are also made by the Bank on behalf of the Minister for Lands under the Discharged Soldiers' Settlement Acts. In addition, assistance is granted by the following authorities :—Irrigation Commissioner ; Department of Public Lands, in respect to water facilities and wire-netting ; Department of Agriculture and Stock, in respect to seed wheat and drought relief ; the Treasurer, in respect to sugar mills.

(ii) *Agricultural Bank Act.* The Agricultural Bank makes advances on the security of a first mortgage over property which is used for agricultural, dairying, grazing, horticultural or viticultural pursuits, poultry or pig raising, or other approved rural pursuits. Further security may be required by way of stock mortgage, bill of sale, lien on crops, etc. The limit of advance to one person is £1,700, and, subject to the succeeding paragraphs, no advance may exceed 16s. in the £1 of the fair estimated security value of the land with its permanent improvements, together with those, if any, to be made by means of the advance applied for.

The purposes for which advances are granted are as follow :—(*a*) Payment of liabilities already existing with respect to the land or payment of the balance of any purchase money in respect of the purchase of the land or any stock, machinery, or implements therefor ; (*b*) effecting improvements on the land ; (*c*) purchase of stock, machinery, or implements ; (*d*) generally in respect of agricultural, dairying, grazing, horticultural, or viticultural pursuits, poultry or pig raising, or other rural pursuits on the land ; (*e*) relief in case of drought, flood, tempest, fire, or other adverse conditions or happenings beyond the control of the borrower ; (*f*) not exceeding £400 for unspecified purposes in connexion with the land, provided that the applicant is a *bona fide* settler residing on and working the land as farm land.

Advances to beginners on the land may be granted within the before-mentioned limit of £1,700 to the full value of the improvements proposed to be made for any one or more of the following objects, but not exceeding in the aggregate £500 at that special rate :—Buildings, ringbarking, clearing, fencing, draining, water conservation (including a well or bore together with lifting power), dairy house and yards, accommodation for pigs, silos, haysheds.

The term for repayment of any advance shall be the term fixed by the Bank, not exceeding 20 years, exclusive of any initial period allowed by the Bank (not exceeding 5 years) during which interest only is payable.

After the expiration of the initial interest-only period, the loan is repayable by equal half-yearly instalments of an amount sufficient to redeem the loan including interest, within the term of years fixed. Advances made on the security of terminating Crown leaseholds must be repaid within a term not later than the date upon which the lease will expire. Special advances for the purchase of dairy stock, sheep, pigs, dairying plant, etc., may be made to settlers on the security of a chattel mortgage over such purchases.

Provision is made for advances under easy terms to groups of settlers for the co-operative purchase of necessary machinery ; such groups must be registered as co-operative companies or associations. The limit of advance in these cases is £1,700 to any one company or association, and must not exceed two-thirds of the cost of the machinery.

Mortgage advances are made under prescribed conditions to co-operative companies and associations for factories and other works for the manufacture, storage, or treatment of primary produce and resultant products.

The rate of interest on any loan under the Agricultural Bank Act is fixed by the Bank when the application for the advance is approved ; up to the present the rate has not exceeded 5 per cent. per annum.

The advances outstanding under the Agricultural Bank Act, as set out in the table below, include advances originally made by the Bank's predecessors under the following legislation and taken over under The Agricultural Bank Act of 1923 :—The Agricultural Bank Act of 1901 ; The Queensland Government Savings Bank Act Act of 1916 ; The State Advances Act of 1916 ; The Co-operative Agricultural Production and Advances to Farmers Acts 1914 to 1919.

(iii) *Discharged Soldiers' Settlement Act.* Advances may be made by the Minister to discharged soldiers who are owners of land in fee-simple or holders of land under tenure from the Crown. Such advances may be made for the purposes of (*a*) the payment of purchase-money ; (*b*) the payment of existing liabilities ; (*c*) making improvements ; (*d*) purchasing live stock, machinery, fruit trees, etc. ; or (*e*) any other approved purpose. The maximum term of advance is 33 years exclusive of an initial period of 7 years during which interest only is payable. The rate of interest for the first year is 3½ per cent., and it increases annually by ½ per cent. up to a maximum of 5 per cent.

(iv) *Amount of Advances.* The following table gives particulars of advances, etc., to 30th June, 1925 :—

ADVANCES TO SETTLERS.—QUEENSLAND, 1924-25.

Act under which Advances were made.	Advances made during Year 1924-25.	Total Advances made to 30th June, 1925.	Amount Outstanding at 30th June, 1925.
	£	£	£
Agricultural Bank Act	282,043	3,839,055	2,137,514
Discharged Soldiers' Settlement Act (*a*)	33,836	2,316,570	1,794,293
Water Facilities	2,705	2,705	2,705
Wire Netting	40,603	40,603	40,603
Seed Wheat	2,101	28,470	13,800
Drought Relief	..	67,831	59,154
Total	361,288	6,295,234	4,048,069

(*a*) Includes advances to group settlements through the Lands Department as well as advances through the Agricultural Bank.

4. South Australia.—(i) *General.* Advances may be made to settlers and others for the purpose of discharging mortgages, making improvements, etc., under the provisions of the State Bank Act 1925, which are briefly summarized hereunder. Loans may be made under the Loans for Fencing Act and the Vermin Act for the purchase of fencing materials in vermin-infested districts. Advances may be made to homestead block-holders (*a*) for erecting buildings ; or (*b*) for making improvements on their land. A loan must not exceed in the case of (*a*) the cost of existing improvements, and in the case of (*b*) one-half the value of the improvements to be effected ; and in no case may a loan exceed £50. Repayment is to be made in 20 equal annual instalments at the rate of £7 7s. 2d. per cent. of the amount advanced. The State Bank may make advances to any settler on the security of his land and improvements (*a*) for making improvements, up to the estimated value of his lease or agreement and improvements, not exceeding £400, and up to three-fourths of such value in excess of £400, but not exceeding £250 ; or (*b*) for stocking his holding, up to £200 ; or (*c*) for discharging an existing mortgage, up to three-fourths of the value of his lease or agreement and improvements ; or (*d*) for any other purpose, up to the same amount. Repayment must be made by 70 equal half-yearly instalments, with interest, but for the first 5 years interest only is payable.

(ii) *State Bank Act 1925.* Under this Act the State Bank of South Australia makes advances under prescribed conditions to farmers and other producers, to local authorities, to persons possessed of the necessary securities, and in aid of industries. No single advance may exceed £5,000. The Bank and the borrower may agree upon the term of years, not exceeding 42, over which repayment may be spread, as well as the interest to be paid. The Bank may, on the security of a mortgage on the property, make loans to any registered co-operative society, three-fourths of the members of which are engaged in or are about to be engaged in rural production, for purposes prescribed.

(iii) *Irrigation Act.* Settlers under this Act are entitled, under prescribed conditions, to loans under the Advances to Settlers on Crown Lands Act, as well as under the Irrigation Act, but not exceeding £600 under both Acts. Advances may be made only on the security of a first mortgage. During the first 5 years interest only is payable, but thereafter the advance must be repaid in 70 equal half-yearly instalments, with interest.

(iv) *Discharged Soldiers' Settlement Act.* Advances are made to soldier settlers for prescribed purposes on liberal terms in regard to payment of principal and interest.

(v) *Agricultural Graduates Land Settlement Act.* Under the provisions of this Act, the Minister may (*a*) purchase land with a view to the settlement thereon of agricultural graduates, the value of which land, with improvements, must not exceed £3,000 for each graduate, and is repayable with interest ; (*b*) the State Bank may advance to any agricultural graduate settler up to £500 for the purpose of purchasing seeds, implements, stock, etc., such advance being repayable on easy terms.

(vi) *Amount of Advances.* The following table gives particulars respecting advances etc., to 30th June, 1925 :—

ADVANCES TO SETTLERS.—SOUTH AUSTRALIA, 30th JUNE, 1925.

Particulars.	Advances made during 1924–25.	Total Advances at 30th June, 1925.	Amount outstanding at 30th June, 1925.
	£	£	£
Department of Lands and Survey—			
Advances to soldier settlers	103,203	5,195,574	4,630,817
Advances to settlers for improvements ..	9,516	627,648	379,252
Advances under Vermin and Fencing Acts	49,534	900,497	270,543
Advances to blockholders	..	41,451	384
Advances for sheds and tanks	3,098	59,415	54,945
Advances in drought-affected areas ..	454	765,824	50,430
Advances under Loans to Producers Act ..	69,815	124.976	124.400
Advances under Closer Settlement Acts ..	6,781	2,309,805	1,651,087
State Bank of South Australia	1,688,121	13,648,914	8,406,156
Irrigation Commission—			
Civilians	14,917	172,121	95,381
Soldier settlers	175,798	1,652,125	1,605,128
Total	2,121,237	25,498,350	17,268,523

5. **Western Australia.**—(i) *General.* Advances to settlers are made by the Agricultural Bank, which was established in 1895. Special advances are also made to returned soldiers.

(ii) *Agricultural Bank.* This bank makes advances to a limit of £2.000 on the security of a first mortgage to persons engaged in agricultural pursuits. The borrower must pay the interest on the amount advanced for the first 5 years, and after the expiration of that term the advance with interest must be repaid within 25 years in half-yearly instalments. The interest is at such rates as may be prescribed, but if over 5 per cent. per annum, must not exceed by more than 1 per cent. the rate of interest paid by the bank on funds raised by the bank.

(iii) *Advances to Soldier Settlers.* A soldier settler may be granted an advance up to £625 for improvements, fertilizers, machinery, plant, etc., and the interest thereon is the full current rate charged by the Agricultural Bank.

(iv) *Amount of Advances.* The following table gives particulars respecting advances, etc., to 30th June, 1925 :—

ADVANCES TO SETTLERS.—WESTERN AUSTRALIA, 1924-25.

Particulars.	Year ended—	Advances made during Year 1924–25.	Total Advances at 30th June, 1925.	Amount outstanding at 30th June, 1925.
		£	£	£
Agricultural Bank advances ..	30.6.25	351,136	5,322,502	3,534.693
Soldier settlement advances ..	30.6.25	385,999	5,321,098	5,298,554
Advances to rural industries ..	30.6.25	1,366	24,347	24,791
Advances to assisted settlers ..	31.3.25	1,201,918	9,459,001	2,078,532
Total	..	1,940,419	20,126,948	10,936,570

6. **Tasmania.**—(i) *General.* Advances to farmers and producers may be made under the State Advances Act, to closer settlement settlers under the Closer Settlement Act, to fruit-growers formed into a registered company under the Advances to Fruit-growers Act, and to returned soldiers under the Returned Soldiers Settlement Act.

(ii) *State Advances Act.* The Agricultural Bank of Tasmania, constituted under this Act, is authorized to borrow up to £150,000 on debentures or stock for the purpose of advancing money to farmers and other primary producers who own land in fee-simple or under purchase from the Crown on credit. Advances are secured on first mortgages, and may be made for any of the purposes prescribed. The repayment of advances commences after 5 years, and the borrower must repay one-fiftieth of the principal sum half-yearly thereafter until the whole amount of the advance is repaid. Interest is payable half-yearly at the rate fixed by the Treasurer.

(iii) *Closer Settlement Act.* Under this Act the Minister may make advances to lessees in aid of the cost of improvements. The total amount advanced may not exceed £ for £ of the sum expended by the lessee in such improvements. Loans are repayable by equal half-yearly instalments with interest, not exceeding 7 per cent., extending over a period not exceeding 21 years.

(iv) *Advances to Fruit-growers Act.* The Minister may make advances for prescribed purposes to registered companies on a first mortgage on freehold land or on a lien on other property. Generally, the amount of advance must not exceed 75 per cent. of the value of the land or plant, but, in the case of a company desiring to purchase grading machinery, it must not exceed 50 per cent. of the value thereof. Liberal terms have been arranged for repayment of principal and interest.

(v) *Returned Soldiers Settlement Act.* Advances up to £625, on easy terms as regards repayment, may be made to discharged soldiers to assist in making improvements and purchasing requisites. The Minister may in certain cases remit wholly or in part the payment of rent or instalments on the purchase-money.

A returned soldier, who has not exercised his option of acquiring a free selection, and who is already a selector of land on credit purchase, is entitled to a remission of his instalments up to £100 if he made application for same before 31st March, 1922.

(vi) *Amount of Advances.* The following table gives particulars respecting advances, etc., to 30th June, 1925 :—

ADVANCES TO SETTLERS.—TASMANIA, 30th JUNE, 1925.

Authority making Advances.	Advances made to—	Advances made during 1924–25.	Total Advances to 30th June, 1925.	Amount outstanding at 30th June, 1925.
		£	£	£
Agricultural Bank ..	Settlers ..	14,784	182,954	102,852
Minister for Lands ..	Soldier Settlers ..	26,532	660,607	333,770
" ..	Closer Settlers ..	1,226	21,488	9,514
" ..	Fruit Growers ..	..	1,447	1,028
Total ..	.. .. ..	42,542	866,496	447,164

7. **Northern Territory.**—(i) *Advances to Settlers Act* 1923. This Act and the Regulations thereunder provide that the Minister for Home and Territories may, out of moneys paid into a Trust Account for the purpose, make advances to the Northern Territory for the purchase of wire netting.

Applicants must offer security for payment and undertake to fulfil the prescribed conditions.

An advance cannot be made on unimproved land or on land on which the rent is overdue.

(ii) *Encouragement of Primary Production Ordinance* 1924-26. Under this Ordinance the Primary Producers Board may, out of moneys voted by Parliament, expend such sums as it deems necessary for the carrying out of its powers under this Ordinance, particularly as regards the granting of assistance to producers for the purposes prescribed. Principal and interest are repayable under easy terms.

(iii) *Amount of Advances.* During the financial year 1924–25 the sum of £5,443 was advanced, making the total amount advanced to the 30th June, 1925, £11,674. The balance outstanding at that date, including interest, was £8,638.

8. **Summary of Advances.**—The following table gives a summary for each State to the 30th June, 1925 :—

ADVANCES TO SETTLERS.—AUSTRALIA, 30th JUNE, 1925.

State.	Advances made during 1924–25.	Total Advances to 30th June, 1925.	Amount outstanding at 30th June, 1925.
	£	£	£
New South Wales	2,307,310	24,474,080	15,109,701
Victoria	2,387,658	36,275,012	27,215,868
Queensland..	361,288	6,295,234	4,048,069
South Australia	2,121,237	25,498,350	17,268,523
Western Australia	1,940,419	20,126,948	10,936,570
Tasmania	42,542	866,496	447,164
Northern Territory	5,443	11,674	8,638
Total	9,165,897	113,547,794	75,034,533

§ 11. Alienation and Occupation of Crown Lands.

1. **General.**—The tables given in the previous parts of this chapter show separately the areas alienated, in process of alienation, or occupied under various tenures. The following tables set out in summarized form the position in regard to the tenure of land in each State, in the Northern Territory, and in the Federal Capital Territory during

the last five years for which information is available. The area unoccupied includes roads, permanent reserves, forests, etc. In some cases, lands which are permanently reserved from alienation are occupied under leases and licences, and have been included therein. Lands occupied under leases or licences for pastoral purposes are frequently held on short tenures only, and could thus be made available for settlement practically whenever required.

2. **New South Wales.**—At the 30th June, 1925, of the total area of New South Wales, 22.4 per cent. had been alienated absolutely, 10.7 per cent. was in process of alienation, 58.1 per cent. was held under leases and licences, and the remaining 8.8 per cent. was unoccupied.

The following table gives particulars for each of the last five years :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—NEW SOUTH WALES, 1920-21 TO 1924-25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated.*					
Granted and sold prior to 1862	7,146,579	7,146,579	7,146,579	7,146,579	7,146,579
Sold by auction and other sales, 1862 to date	15,182,649	15,184,016	15,188,819	14,962,345	14,969,185
Conditionally sold, 1862 to date	19,228,810	19,970,073	20,637,146	21,233,270	21,823,491
Granted under Volunteer Land Regulations, 1867 to date ..	172,198	172,198	172,198	172,198	172,198
Granted for public and religious purposes	241,417	241,742	242,674	244,282	244,850
Total	41,971,653	42,714,608	43,387,416	43,758,674	44,356.303
2. *In Process of Alienation.*					
Conditional purchases.. ..	18,672,521	18,437,590	18,200,900	18,122,045	18,156,194
Closer settlement purchases ..	1,995,225	2,385,411	2,427,826	2,573,115	2,674,217
Soldiers' group purchase ..	..	..	..	410.567	390,396
Other forms of sale	..	..	..	11,002	14,978
Total	20,667,746	20,823,001	20,628,726	21,116,729	21,235,785
3. *Held under Leases and Licences.*					
Total under Lands Department and Western Land Board ..	116,142,203	115,450,062	115,391,357	114,916,852	114,656,643
Mineral and auriferous leases and licences (Mines Department)..	268,851	281,503	307,336	299,688	390,193
Total	116,411,054	115,731,565	115,698,693	115,216,540	115,046,836
4. *Unoccupied*	18,986,047	18,767,326	18,321,665	17,944,557	17,397,576

Area of State—198,036,500 acres.

3. **Victoria.**—The total area of the State of Victoria is 56,245,760 acres, of which 44.9 per cent. had been alienated absolutely up to the end of the year 1924; 16.0 per cent. was in process of alienation under deferred payments and Closer Settlement Schemes; 14.8 per cent. was occupied under leases and licences; while 24.3 per cent. was unoccupied.

The following table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—VICTORIA, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated*	24,793,053	24,903,109	24,947,732	25,090,672	25,278,681
2. *In Process of Alienation*—					
Exclusive of Mallee, etc. ..	1,937,933	1,933,656	2,021,372	2,101,155	2,138,684
Mallee Lands	6,274,011	6,303,229	6,345,499	6,241,691	6,330,141
Under Closer Settlement Acts ..	520,003	528,545	542,978	532,274	532,274
Village Settlements	14,155	12,694	995	861	791
Total	8,746,102	8,778,124	8,910,844	8,875,981	9,001,890
3. *Leases and Licences held*—					
Under Lands Department ..	9,991,558	8,940,521	9,237,593	9,220,529	8,254,933
Under Mines Department ..	48,561	52,892	52,866	52,849	52,818
Total	10,040,119	8,993,413	9,290,459	9,273,378	8,307,751
4. *Unoccupied Crown Lands* ..	12,666,486	13,571,114	13,096,725	13,005,729	13,657,438

Total area of State—56,245,760 acres.

4. **Queensland.**—The total area of this State is 429,120,000 acres, of which, on the 31st December, 1924, 4.1 per cent. was alienated absolutely ; 1.6 per cent. was in process of alienation ; and 72.2 per cent. was occupied under leases and licences. The remainder (22.1 per cent.) was either unoccupied or held as reserves, or for roads.

The distribution is shown in the following table :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—QUEENSLAND, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated Absolutely.*					
By Purchase	16,935,558	17,064,697	17,156,804	17,255,176	17,331,516
Without Payment	86,742	87,731	87,740	87,773	87,909
Total	17,022,300	17,152,428	17,244,544	17,342,949	17,419,425
2. *In Process of Alienation* ..	8,659,280	8,280,296	7,833,127	7,358,971	7,150,240
3. *Occupied under Leases and Licences.*					
Pastoral Leases	209,248,960	201,010,760	185,348,400	189,353,840	188,975,840
Occupation Licences	33,830,400	33,526,240	34,610,680	34,529,120	35,323,000
Grazing Farms and Homesteads	79,397,073	78,658,048	78,983,282	79,783,557	81,200,031
Scrub Selections	112,137	86,289	77,283	72,886	69,052
Leases—Special Purposes ..	218,563	246,783	258,706	303,853	362,778
Under Mines Department ..	342,880	422,368	511,137	454,586	508,058
Perpetual Lease Selections ..	2,694,626	3,060,954	3,166,134	3,147,890	3,205,349
Auction Perpetual Leases ..	9,135	10,001	11,249	12,558	13,536
Total	325,853,774	317,021,443	302,966,871	307,658,290	309,657,644
4. *Unoccupied*	77,584,646	86,665,833	101,075,458	96,759,790	94,892,691

Total area of State—429,120,000 acres.

5. **South Australia.**—The area of the State of South Australia is 243,244,800 acres, and at the end of the year 1925, 4.7 per cent. was alienated absolutely ; 1.4 per cent. in process of alienation ; 50.0 per cent. occupied under leases and licences ; and 43.9 per cent. unoccupied.

The subjoined table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—SOUTH AUSTRALIA, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated—*					
Sold	10,882,906	10,936,750	10,987,030	11,104,386	11,216,755
Granted for Public Purposes	131,191	131,741	131,741	132,672	132,689
Total	11,014,097	11,068,491	11,118,771	11,237,058	11,349,444
2. *In Process of Alienation* ..	3,192,633	3,023,556	3,123,674	3,270,884	3,397,866
3. *Held under Lease and Licence—*					
Right of Purchase Leases ..	2,202,841	2,112,350	2,081,003	2.038,090	2,005,708
Perpetual Leases	14,849,184	14,756,565	14,956,020	14,944,537	15.041,948
Pastoral Leases	102,832,050	98,760,263	105,984,903	108,796,663	102,871,703
Other Leases and Licences ..	909,764	886,989	962,985	864,648	1,273,003
Mining Leases and Licences	642,570	512,841	653,899	586,025	368,922
Total	121,436,409	117,029,008	124,638,810	127,229,963	121,561,284
4. *Area Unoccupied*	107,601,661	112,123,745	104,363,545	101,506,895	106,936,206

Total area of State—243,244,800 acres.

6. **Western Australia.**—The total area of Western Australia is 624,588,800 acres, of which, at the 30th June, 1925, 1.7 per cent. was alienated absolutely ; 2.9 per cent. was in process of alienation ; while 37.3 per cent. was occupied under leases and licences issued either by the Lands or the Mines Departments. The balance of 58.1 per cent. was unoccupied.

The following table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—WESTERN AUSTRALIA, 1920-21 TO 1924-25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated Absolutely* ..	9,197,088	9,724,931	10,051,080	10,520,028	10,889,513
2. *In Process of Alienation—*					
Midland Railway Concessions	54,800	54,800	54,800	54,800	54,800
Free Homestead Farms ..	1,017,255	941,485	961,492	963,700	933,793
Conditional Purchases ..	7,544,062	7,615,430	8,028,588	8,187,635	7,906,971
Selections from the late W.A. Company	2,193	2,193	2,193	2,193	2,143
Selections under the Agricultural Lands Purchase Act	485,129	539,927	565,780	572,410	558,087
Special Occupation Leases and Licences	1,298	1,208	820	820	722
Homestead or Grazing Leases	5,887,426	6,833,398	7,357,291	7,998,598	8,425,594
Poison Land Leases or Licences	42,275	42,275	42,275	42,275	40,828
Village Allotments ..	29	28	27	13	4
Working-men's Blocks ..	492	342	320	157	..
Total	15,034,959	16,031,176	17,013,586	17,822,601	17,922,942

ALIENATION AND OCCUPATION OF CROWN LANDS.—WESTERN AUSTRALIA, 1920–21 TO 1924–25—*continued.*

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	Acres.	Acres.	Acres.	Acres.	Acres.
3. *Leases and Licences in Force—*					
(i) Issued by Lands Department—					
Pastoral Leases ..	254,688,286	263,403,351	258,238,151	214,818,111	228,919,930
Special Leases	57,156	57,509	49,213	40,144	41,873
Leases of Reserves ..	1,988,713	2,156,186	2,101,795	2,084,766	2,127,840
Residential Lots ..	272	4,422	5,769	171	145
(ii) Issued by Mines Department—					
Gold Mining Leases ..	24,540	8,934	8,934	8,191	7,395
Mineral Leases ..	41,843	46,056	47,275	48,214	45,407
Miners' Homestead Leases	36,401	35,828	35,828	33,254	32,653
Timber Leases and Concessions	590,314	585,453	585,110	545,334	545,274
Timber Permits ..	1,076,809	1,322,168	1,075,101	1,320,531	1,210,752
Total	258,504,334	267,619,907	262,147,176	218,898,716	232,931,269
4. *Area Unoccupied*	341,852,419	331,212,786	335,376,958	377,347,455	362,845,076

Total Area of State—624,588,800 acres.

7. **Tasmania.**—At the end of the year 1924, 32.7 per cent. of the total area had been alienated absolutely; 4.4 per cent. was in process of alienation; 14.3 per cent. was occupied under leases and licences for either pastoral, agricultural, timber, or mining purposes, or for closer or soldier settlement, or occupied or reserved by the Crown; the remainder (48.6 per cent.) being unoccupied.

The following table shows the distribution:—

ALIENATION AND OCCUPATION OF CROWN LANDS.—TASMANIA, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated Absolutely*	5,241,856	5,259,066	5,326,825	5,407,937	5,490,734
2. *In Process of Alienation*	963,915	920,206	880,410	798,043	729,861
3. *Leases or Licences—*					
(i) *Issued by Lands Department—*					
Islands	107,000	108,000	107,000	107,000	107,000
Ordinary Leased Land ..	1,540,000	1,608,000	1,577,653	1,593,000	1,574,000
Land Leased for Timber ..	230,524	236,847	308,072	272,270	282,673
Closer Settlement	68,192	80,435	93,399	93,000	90,753
Soldier Settlement	162,516	219,118	202,673	192,600	188,652
Other Leases	1,000	1,000	1,000	1,000	1,000
(ii) *Issued by Mines Department* ..	46,380	52,476	49,823	42,866	37,024
(iii) *Occupied by Commonwealth and State Departments*	18,000	18,000	18,000	18,000	18,000
(iv) *Reserved for Public Purposes* ..	100,000	100,000	100,000	100,000	100,000
Total	2,273,612	2,423,876	2,457,620	2,419,736	2,399,102
4. *Area Unoccupied*	8,298,617	8,174,852	8,113,145	8,152,284	8,158,303

Total area of State—16,778,000 acres.

8. **Northern Territory.**—At the end of the year 1925 only 0.14 per cent. was alienated absolutely; 43.69 per cent. was held under leases and licences; while the remaining 56.17 per cent. was unoccupied. The following table shows the distribution:—

ALIENATION AND OCCUPATION OF CROWN LANDS.—NORTHERN TERRITORY, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated*—					
Sold	476,508	476,508	476,508	476,864	476,864
Granted for Public Purposes	48	48	48	48	48
Total Alienated ..	476,556	476,556	476,556	476,912	476,912
2. *Leased*—					
Right of Purchase ..	356	356	356	..	..
Pastoral	119,069,760	114,876,000	113,864,720	114,368,266	111,780,746
Other Leases	18,606,537	19,612,170	22,462,896	24,786,688	34,633,960
Total Leases ..	137,676,653	134,488,526	136,327,972	139,154,954	146,414,706
3. *Unoccupied* (*a*)	196,963,591	200,151,718	198,312,272	195,484,934	188,225,182

Total area of Northern Territory—335,116,800 acres.

(*a*) Including Aboriginal and other Reserves, and Mission Stations.

9. **Federal Capital Territory.**—In the following table the particulars given are exclusive of the Jervis Bay area. Alienated land comprised in 1925, 7.9 per cent. of the total area, land in process of alienation 9.4 per cent., and lands held under lease 17.7 per cent. of the total area.

ALIENATION AND OCCUPATION OF CROWN LANDS.—FEDERAL CAPITAL TERRITORY, 1922 TO 1925.

Particulars.	1922.	1923.	1924.	1925.
	Acres.	Acres.	Acres.	Acres.
Area of acquired lands ..	206,056	206,000	206,296	209,531
Alienated	44,686	43,982	43,686	46,404
In process of alienation ..	73,345	74,070	74,070	54,832
Leased	123,800	119,552	119,552	103,511
Unoccupied	135,773	140,056	140,056	169,382

Total area of Federal Capital Territory (exclusive of Jervis Bay area)—583,660 acres.

§ 12. Classification of Alienated Holdings According to Size.

Information in regard to the number of holdings in acreage groups is not collected annually, and is not available for Queensland and the Northern Territory. With the exception of Western Australia, where the figures were brought up to the year 1923–24, the published returns relate generally to the five years ended 1921–22. Tables containing the information to hand were given in Official Year Book No. 18, pp. 204–6, but consideration of space preclude their repetition in the present issue.

§ 13. The Progress of Land Settlement.

1. **Recent Progress.**—The progress of settlement and the growth of land alienation under recent legislation may be gathered from the subjoined statement, which shows the condition of the public estate in each State at the end of each year from 1920 to 1924 inclusive. As leases of large areas fall in or are otherwise terminated they are in many cases not renewed, but the land is then divided for the purpose of settlement under systems of deferred payment; the State Governments, also, have in many cases acquired by repurchase considerable areas under the provisions of the various Closer Settlement Acts. Further, greater facilities have been granted to workers to acquire land, and special inducements have been offered to *bona fide* settlers by the introduction of new forms of tenure on easy terms and conditions.

From 1901 to 1924 the area alienated absolutely in the whole of Australia increased by 38,194,312 acres, or 50.2 per cent.; the area in process of alienation increased by 24,224,662 acres, or 69.1 per cent.; the area leased by 193,895,326 acres, or 26.9 per cent.; while the area unoccupied decreased by 256,313,900 acres, or 23.9 per cent.

AREAS ALIENATED, IN PROCESS OF ALIENATION, HELD UNDER LEASE OR LICENCE AND UNOCCUPIED, 1920 TO 1924.

Year.	Alienated.		In Process of Alienation.		Held under Lease or Licence.		Occupied by the Crown or Unoccupied.	
	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.
NEW SOUTH WALES.—AREA, 198,036,500 ACRES.(a)								
1920	40,973,189	20.69	20,876,424	10.54	116,773,795	58.97	19,413,092	9.80
1921	41,971,653	21.19	20,667,746	10.44	116,411,054	58.78	18,986,047	9.59
1922	42,714,608	21.57	20,823,001	10.51	115,731,565	58.44	18,767,326	9.48
1923	43,387,416	21.91	20,628,726	10.42	115,698,693	58.42	18,321,665	9.25
1924	43,758,674	22.10	21,116,729	10.72	115,216,540	58.17	17,944,557	9.01
VICTORIA.—AREA, 56,245,760 ACRES.								
1920	24,793,053	44.08	8,746,102	15.55	10,040,119	17.85	12,666,486	22.52
1921	24,903,109	44.28	8,778,124	15.60	8,993,413	15.99	13,571,114	24.13
1922	24,947,732	44.35	8,910,844	15.84	9,290,459	16.52	13,096,725	23.29
1923	25,090,672	44.61	8,875,981	15.78	9,273,378	16.49	13,005,729	23.12
1924	25,278,681	44.94	9,001,890	16.00	8,307,751	14.77	13,657,438	24.29
QUEENSLAND.—AREA, 429,120,000 ACRES.								
1920	17,022,300	3.97	8,659,280	2.02	325,853,774	75.93	77,584,646	18.08
1921	17,152,428	4.00	8,280,296	1.93	317,021,443	73.88	86,665,833	20.19
1922	17,244,544	4.02	7,833,127	1.83	302,966,871	70.60	101,075,458	23.55
1923	17,342.949	4.04	7,358,971	1.71	307,658,290	71.70	96,759,790	22.55
1924	17,419,425	4.06	7,150,240	1.67	309,657,644	72.16	94,892,691	22.11
SOUTH AUSTRALIA.—AREA, 243,244,800 ACRES.								
1920	10,931,966	4.50	3,166,524	1.30	119,554,730	49.15	109,591,580	45.05
1921	11,014,097	4.53	3,192,633	1.31	121,436,409	49.92	107,601,661	44.24
1922	11,068,491	4.55	3,023,556	1.24	117,029,008	48.11	112,123,745	46.10
1923	11,118,771	4.57	3,123,674	1.28	124,638,810	51.24	104,363,545	42.91
1924	11,349,444	4.67	3,397,866	1.40	121,561,284	49.97	106,936,206	43.96

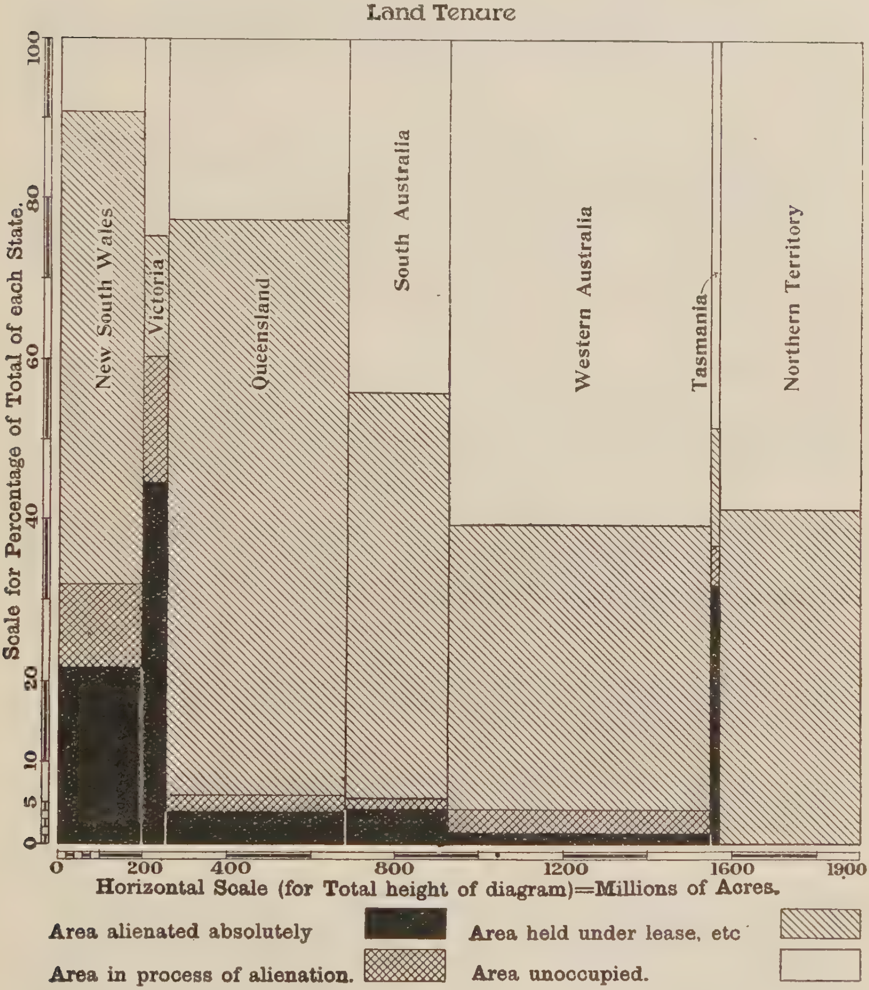
(a) To 30th June.

AREAS ALIENATED, IN PROCESS OF ALIENATION, ETC.—*continued.*

Year.	Alienated.		In Process of Alienation.		Held under Lease or Licence.		Occupied by the Crown or Unoccupied.	
	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.
WESTERN AUSTRALIA.—AREA, 624,588,800 ACRES.(*a*)								
1920	8,763,051	1.40	14,259,769	2.28	257,610,300	41.25	343,955,680	55.07
1921	9.197,088	1.47	15,034,959	2.41	258,504,334	41.39	341,852,419	54.73
1922	9,724,931	1.56	16,031,176	2.56	267,619,907	42.85	331,212,786	53.03
1923	10,051,080	1.61	17.013,586	2.72	262,147,176	41.97	335,376,958	53.70
1924	10,520,028	1.68	17,822,601	2.85	218,898,716	35.05	377,347,455	60.42
TASMANIA.—AREA, 16,778,000 ACRES.								
1920	5,241,856	31.24	963,915	5.75	2,273,612	13.55	8,298,617	49.46
1921	5,259,066	31.35	920,206	5.48	2,423,876	14.45	8,174,852	48.72
1922	5,326,825	31.75	880,410	5.25	2,457,620	14.65	8,113,145	48.35
1923	5,407,937	32.23	798,043	4.76	2,419,736	14.42	8,152,284	48.59
1924	5,490,734	32.72	729,861	4.35	2,399,102	14.30	8,158,303	48.63
NORTHERN TERRITORY.—AREA, 335,116,800 ACRES.								
1920	476,556	0.14	..	..	143,274,151	42.75	191,366,093	57.11
1921	476,556	0.14	..	..	137,676.653	41.09	196,963,591	58.77
1922	476,556	0.14	..	..	134,488,526	40.13	200,151,718	59.73
1923	476,556	0.14	..	..	136,327,972	40.68	198,312,272	59.18
1924	476,912	0.14	..	..	139,154,954	41.52	195,484,934	58.34
FEDERAL CAPITAL TERRITORY.—AREA, 601,580 ACRES.								
1920	41,269	6.86	78,084	12.98	152,386	25.32	329,841	54.84
1921	39,967	6.64	78,064	12.98	152,378	25.32	331,171	55.06
1922	44,708	7.43	66,325	11.03	300,697	49.99	189,850	31.55
1923	43,982	7.31	74,070	12.31	119,899	19.93	363,629	60.45
1924	43,175	7.18	65,594	10.90	106,619	17.72	386,192	64.20
AUSTRALIA.—AREA, 1,903,732,240 ACRES.								
1920	108,243,240	5.69	56,750,098	2.98	975,532,867	51.24	763,206,035	40.09
1921	110,013,964	5.78	56,952,028	2.99	962,619,560	50.57	774,146,688	40.66
1922	111,548,395	5.86	57,568,439	3.02	949,884,653	49.90	784,730,753	41.22
1923	112,919,363	5.93	57,873,051	3.04	958,283,954	50.34	774,655,872	40.69
1924	114,337,073	6.01	59,284,781	3.11	915,302,610	48.08	814,807,776	42.80

(*a*) To 30th June.

2. **Diagram showing Condition of Public Estate.**—The following diagram shows the condition of the public estate at the end of the year 1924. The square itself represents the total area of Australia, while the relative areas of individual States are shown by the vertical rectangles. The areas alienated absolutely, in process of alienation under systems of deferred payments, and the areas held under leases or licences, are designated by the differently-shaded areas as described in the reference given below the diagram, while the areas unoccupied are left unshaded. :—



CHAPTER VI.

OVERSEA TRADE.

§ 1. Introductory.

1. Constitutional Powers of the Commonwealth in regard to Commerce.—The powers vested in the Commonwealth Parliament by the Commonwealth Constitution Act with respect to oversea trade and commerce will be found in sub-section 51 (i) and sub-sections 86 to 95 of the Act, which is printed in full in Chapter I. of this volume.

§ 2. Commonwealth Legislation affecting Foreign Trade.

1. General.—In previous issues of the Year Book brief particulars of the various Commonwealth Acts and amendments thereof affecting foreign trade have been given in chronological order. It is not proposed to repeat this information in the present issue, but the main provisions of the initial Commonwealth Customs Legislation and also of the principal Acts in operation at the present time affecting foreign trade are mentioned hereunder.

2. Development of Customs Legislation.—(i) *Customs Act of 1901.* The first Commonwealth Act relating to Customs, entitled "Customs Act 1901 (No. 6 of 1901)," came into operation by proclamation on the 4th October, 1901. This Act provided for the establishment of the necessary administrative machinery for all matters pertaining to the Customs, and prescribed, *inter alia*, the manner in which Customs duties shall be computed and paid. It did not, however, determine the rates of duties.

During the interval between the establishment of the Commonwealth, viz., on 1st January, 1901, and the coming into operation of the Customs Act 1901, the Customs Acts of the several States were administered by the Executive Government of the Commonwealth under Section 86 of the Constitution.

(ii) *Customs Act 1901–1925.* Several amendments of the original Act of 1901 have been made, and have been incorporated in the Customs Act 1901–1925, which comprises the Customs Act 1901 (No. 6 of 1901), as amended by Acts No. 36 of 1910, No. 19 of 1914, No. 10 of 1916, No. 19 of 1922, No. 12 of 1923, and No. 22 of 1925. The Customs Act 1901 has also been amended by the Spirits Act 1906 (No. 21 of 1906), section 5, and by the Customs (Interstate Accounts Act) 1910 (No. 9 of 1910), section 2. Act No. 12 of 1923 provides that aeroplanes, seaplanes, airships, etc., from parts beyond the seas shall be subject to similar Customs control to that provided for vessels from oversea. Act No. 22 of 1925 provides new conditions relating to the application of the Preferential Tariff.

(iii) *The First Tariff.* The first Commonwealth Customs Tariff was introduced in the House of Representatives on the 8th October, 1901, and the "Customs Tariff Act 1902 (No. 14 of 1902)" was assented to on the 16th September, 1902. This Act made provision that uniform duties of Customs specified in the Tariff Schedule should be imposed from the 8th October, 1901. From this date, trade between the States became free, with the exception that under Section 95 of the Constitution Act the right was reserved to the State of Western Australia to levy duty on the goods from other States for five years. Prior to the establishment of the Commonwealth, a different tariff was in operation in each State, and interstate trade was subject to the same duties as oversea trade.

3. Customs Tariff 1921 (No. 25 of 1921).—The Tariff Schedule which (with the amendments noted hereinafter) is now in operation was submitted to Parliament on the 24th March, 1920, and the Act was assented to on the 16th December, 1921. The date of commencement of the imposition of the duties of Customs imposed by this Act was the 25th March, 1920. The Tariff Schedule provides a British Preferential Tariff, an Intermediate Tariff, and a General Tariff. The main provisions of the Act are mentioned hereunder :—

The rates of duty set out in the Schedule in the column headed "British Preferential Tariff" apply to goods the produce or manufacture of the United Kingdom, subject to the condition that the goods have been shipped in the United Kingdom to Australia, and have not been transhipped, or, if transhipped, then only if it is proved satisfactorily that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia (Section 8).

The provisions of the British Preferential Tariff may be applied wholly or in part to any portion of the British Dominions, and the provisions of the Intermediate Tariff may be applied wholly or in part to any portion of the British Dominions or to any foreign country.

The Act of 1921 repealed the following Acts :—Customs Tariff 1908 (No. 7 of 1908) ; Customs Tariff Amendment 1908 (No. 13 of 1908) ; Customs Tariff 1910 (No. 39 of 1910) ; Customs Tariff 1911 (No. 19 of 1911) ; and with the exception of the proposals contained in such Acts relating to the Tariff on goods imported from, and the produce or manufacture of, the Union of South Africa, the Customs Tariff Validation Act 1917, and the Customs Tariff Validation Act 1919.

4. **Customs Tariff 1922 (No. 16 of 1922).**—This Act was assented to on the 28th September, 1922, and amended the Schedule to the Customs Tariff 1921. The items of import affected by the amendments to the Schedule were—wire, wire fencing, wire netting, traction engines, and alternating current-recording watt-hour meters.

5. **Customs Tariff (Sugar) 1922 (No. 32 of 1922).**—This Act was assented to on the 18th October, 1922, and amended the Schedule to the Customs Tariff 1921–1922. The amendments related to the duties on sugar, golden syrup and sugar syrups.

6. **Customs Tariff 1923 (No. 22 of 1923).**—This Act was assented to on 1st September, 1923, and amended the Schedule to the Customs Tariff 1921–22, by inserting in Item 275 of the Schedule after Sub-item A (1) the following proviso :—"Provided that, so long as a bounty is payable on sulphur under any law of the Commonwealth, the importation of sulphur to which this Sub-item applies shall be free of duty."

7. **Customs Tariff 1924 (No. 1 of 1924).**—This Act was assented to on 19th May, 1924, and amended item 3 (A) of the Schedule to the Customs Tariff 1921–23 relating to the rates of duty on brandy.

8. **Customs Tariff Validation Act 1925 (No. 31 of 1925.)**—This Act was assented to on 26th September, 1925, and provided for the validation of collections of duties of Customs under tariff proposals introduced into the House of Representatives on 2nd and 18th September, 1925.

9. **Customs Tariff 1926.**—A Bill for an Act relating to Duties of Customs was passed by the House of Representatives on 26th March, 1926, and forwarded to the Senate for its concurrence on that date. The Act was assented to on the 8th July, 1926, and came into operation on the 5th of that month: the amendments to the Schedule to the Customs Tariff 1921–24 take effect from various dates and cover a wide range of commodities, affecting about 80 items of the Schedule of Customs Tariff 1921–24.

10. **South African Preference.**—By the Customs Tariff (South African Preference) 1906 it was provided that certain goods, specified in the Schedule to that Act, imported from, and the produce or manufacture of, any of the British South African Colonies or Protectorates included in the South African Customs Union, should be admitted to the Commonwealth at preferential rates as compared with the general rates then in force under the Schedule to the Customs Tariff 1902. The Customs Tariff 1926 repealed the Customs Tariff (South African Preference) 1906, and also Section 15 of the Customs

Tariff 1921–24, which provided for a continuance of the South African Preference as set out in the Act of 1906. The repeal came into operation on the first day of July, 1926, and thereafter the provisions of the Customs Tariff 1921–26 apply in relation to goods imported from South Africa which are entered for home consumption on and after that date.

11. **British Preference.**—The Customs Tariff 1908 (No. 7 of 1908) made provision for preferential rates of Customs duties on certain goods the produce or manufacture of the United Kingdom. This Act was repealed by the Customs Tariff 1921 (No. 25 of 1921), the main provisions of which have already been mentioned.

12. **New Zealand Preference.**—The Customs Tariff (New Zealand Preference) 1922 (No. 3 of 1922) was assented to on the 23rd August, 1922, and repealed Act No. 27 of 1921. The Act was proclaimed on the 1st September, 1922, and the duties of Customs provided for in the Schedule of the Act came into force on and from that date. The Act provided that the duties of Customs on goods imported direct from, and the produce or manufacture of, the Dominion of New Zealand shall be in accordance with the following rates :—

(*a*) On all goods described in the Tariff Schedule against which rates of duty are set out in the column headed " Proposed Duties against New Zealand " the rates so set out.

(*b*) On all goods other than those provided for in paragraph (*a*) the rates of duty for the time being applicable to goods to which the British Preferential Tariff applies.

The Act ratifies and confirms the agreement made on the 11th April, 1922, between the Commonwealth of Australia and the Dominion of New Zealand.

The Act provides that, from and after the 1st May, 1922, duties of Customs on goods not being the produce or manufacture of New Zealand which are imported into the Commonwealth from that Dominion and upon which, if they had been imported into the Commonwealth direct from the country of origin, there would have been payable duties of Customs at the rates set out in the British Preferential Tariff shall be in accordance with the rates set forth in that particular tariff.

The Customs Tariff (New Zealand Preference, No. 2).—Act No. 36 of 1922, assented to on 18th October, 1922, relates to the rates of duty on certain imports from New Zealand specified in the Schedule to the Act. The goods specified are—meats, preserved in tins or other airtight vessels ; sheets and roofing slates composed of cement and asbestos or of similar materials ; dairying machines and implements, viz.,—curd agitators and curd mixers ; and corn (millet) brooms.

New Zealand Re-exports Act 1924 (No. 21 of 1924) assented to on 16th September, 1924, relates to the value for duty of goods not the produce or manufacture of New Zealand, which are imported into Australia from New Zealand.

13. **Papua and New Guinea Preference.**—The Customs Tariff (Papua and New Guinea Preference) 1926 (No. 6 of 1926) was assented to on 15th February, 1926, and relates to Customs Preference on goods the produce of Papua and the Territory of New Guinea. The importation into Australia, direct from Papua or New Guinea, of such of the goods specified in the Schedule to the Act as were produced in the Territory shall, notwithstanding anything contained in the Customs Tariff 1921–1924, be free of duty. The items specified in the Schedule are :—Coffee; fruits, dried, viz., litchi ; fruits, fresh, various native fruits ; fungi ; ginger ; rangoon beans ; coconuts ; and seeds, viz., kapok and sesame.

14. **Tariff Board Act 1921 (No. 21 of 1921).**—This Act, which was assented to on the 15th December, 1921, as amended by Tariff Board Act 1923 (No. 25 of 1923), provides for the appointment of a Tariff Board consisting of four members, one of whom shall be an administrative officer of the Department of Trade and Customs. This member shall be appointed Chairman of the Board. The purpose of the Tariff Board is to assist the Minister in the administration of matters relating to trade and customs. The more important matters which the Minister shall refer to the Board for enquiry and report include the classification of goods for duty ; the deter-

mination of the value of goods for duty ; any disputes arising out of the interpretation of any Customs or Excise Tariff ; the necessity for new, increased or reduced duties ; the necessity for granting bonuses ; any proposal for the application of the British Preferential Tariff or the Intermediate Tariff to any part of the British Dominions or any foreign country ; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the tariff by charging unnecessarily high prices for his goods or acting in restraint of trade. The Minister may refer to the Board for enquiry and report the following matters :—the general effect of the working of the Customs Tariff and the Excise Tariff ; the fiscal and industrial effects of the Customs laws of the Commonwealth ; the incidence between the rates of duty on raw materials and on finished or partly finished products ; and any other matter affecting the encouragement of primary and secondary industries in relation to the tariff.

15. **Tariff Board Act 1924 (No. 29 of 1924).**—This Act, which was assented to on 26th September, 1924, amended the Tariff Board Act 1921–23. Section 5 of the Principal Act provided for a Tariff Board consisting of three members. The section was amended by Tariff Board Act (No. 25 of 1923) by omitting the word " three " and inserting in its stead the word " four."

Section 6, sub-section (3), of the principal Act was amended during 1924 (Act No. 29 of 1924) by providing that members of the Board shall be appointed for a term not being less than one year nor more than three years. This amending Act provides that in inquiries conducted by the Board relating to any revision of the Tariff, any proposal for a bounty, or any complaints that a manufacturer is taking undue advantage of the protection afforded him by the Tariff, shall be held in public and evidence in such inquiries shall be taken in public on oath, unless any witness objects to giving any evidence in public which the Board is satisfied is of a confidential nature, when the Board may take such evidence in private. Evidence taken by the Board in connexion with any inquiry under the Customs Tariff (Industries Preservation) Act 1921–22 shall be taken in public on oath. Section 37 of the Principal Act relating to duration of Act is repealed.

The Annual Report of the Tariff Board, issued in accordance with Section 18 (1) of the Tariff Board Act 1921, reviews the work of the Board to June, 1925. The Report covers :—(*a*) Operation of the Tariff in regard to—(1) Primary Industries ; (2) Secondary Industries ; (3) Deferred Duties ; (4) Admission of Goods under By-laws ; (5) Tariff Revision ; (6) Industries Preservation Act ; (7) Bounties ; (8) United Kingdom Preference ; (9) Special Matters ; and (10) General. There are also attached to the Report copies of different reports made by the Tariff Board on matters of particular interest, including recommendations made by the Board relating to Tariff revision.

16. **Customs Tariff (Industries Preservation) Act 1921 (No. 28 of 1921).**—This Act, assented to on the 16th December, 1921, provides that after inquiry and report by the Tariff Board, special duties shall be collected in the following cases when the importation of the goods referred to might be detrimental to an Australian industry :—In the case of goods sold for export to Australia at a price less than the fair market price for home consumption or at a price which is less than a reasonable price, a special dumping duty shall be collected equal to the difference between the price at which the goods were sold and a fair market price. Similar provision is made for goods consigned to Australia for sale. With regard to goods exported to Australia at rates of freight less than the rates prevailing at the time of shipment, there shall be collected a dumping freight duty equal to 5 per cent. of the fair market value of the goods at the time of shipment. Special duties are also imposed in the case of goods imported from countries whose currency is depreciated. Provision is also made for the protection of the trade of the United Kingdom in the Australian market from depreciated foreign currency.

Several amendments of the Act have been recommended by the Tariff Board and have been put into effect.

The Act provides that the Minister for Trade and Customs, after inquiry and report by the Tariff Board, may publish a notice in the *Commonwealth Gazette* specifying the goods upon which special rates of duty under this Act shall be charged and collected.

Since the Act came into operation over 300 notices have been gazetted, including those which revoked previous gazettals, the majority of the notices being made under Sections 8 and 9 of the Act and relating to commodities from countries with depreciated currency to the detriment of Australian or British industries. Over 50 per cent. of the gazettals relate to goods imported from Germany. Three gazettals affect certain goods imported from all countries, while 2 affect goods from all countries excepting United Kingdom. Separate notices have been issued relating to goods from 17 different countries. The commodities brought under the various sections of the Act exceed 150 and cover a very wide range of goods.

17. **Commerce (Trade Descriptions) Act 1905 (No. 16 of 1905).**—This Act was assented to on the 8th December, 1905, and brought into operation by proclamation on the 8th June, 1906. It gives power to compel the placing of a proper description on certain prescribed goods, or on packages containing the same, being imports or exports of the Commonwealth. The imports to which a trade description must be applied are :—(*a*) Articles used for food or drink by man, or used in the manufacture or preparation of articles used for food or drink by man ; (*b*) medicines or medicinal preparations for internal or external use ; (*c*) manures ; (*d*) apparel (including boots and shoes), and the materials from which apparel is manufactured ; (*e*) jewellery ; (*f*) agricultural seeds and plants.

18. **Acts Passed in 1925.**—The following Acts relating to Australian production and trade were assented to during the year 1925 :—

Export Guarantee Act 1925 (No. 4 of 1925). This Act amends Section 5 of Export Guarantee Act 1924 (No. 42 of 1924).

Customs Act 1925 (No. 22 of 1925). This Act amends Customs Act 1901–1923 by inserting Section (151A) in regard to " conditions relating to application of Preferential Tariff " after Section 151.

Excise Tariff Validation Act 1925 (No. 30 of 1925). An Act to provide for the validation of collections of duties of excise under tariff proposals.

Customs Tariff Validation Act 1925 (No. 31 of 1925). An Act to provide for the validation of collections of duties of customs under tariff proposals introduced into the House of Representatives on 2nd and 18th September, 1925.

§ 3. Method of Recording Imports and Exports.

1. **Value of Imports.**—The recorded value of goods imported from countries beyond Australia as shown in the following tables represents the amount on which duty is payable or would be payable if the duty were charged *ad valorem*. The value of goods is taken to be 10 per cent. in advance of their fair market value in the principal markets of the country whence the goods were exported. Acting upon a recommendation of the Tariff Board the section of the Customs Act relating to the valuation of imports was recently amended, and Section 154 (1) of the Customs Act 1901–1925 now provides that " when any duty is imposed according to value, the value for duty shall be the sum of the following :—

(*a*) (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction, or

(ii) the current domestic value of the goods, whichever is the higher ;

(*b*) all charges payable or ordinarily payable for placing the goods free on board at the port of export ; and

(*c*) ten per centum of the amounts specified under paragraphs (*a*) and (*b*) of this sub-section.

" Current domestic value " is defined as " the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country."

Section 157 of the Customs Act provides that when the invoice value of imported goods is shown in any currency other than British currency, the equivalent value in British currency shall be ascertained according to a fair rate of exchange. Under this section it was the practice of the Department of Trade and Customs, until the 8th December, 1920, to convert on the basis of the mint par of exchange. Since the date mentioned, in consequence of a ruling of the High Court, all conversions have been based on the commercial rates of exchange.

2. **Value of Exports.**—The recorded value of goods exported is taken to represent the value in the principal markets of the Commonwealth in the ordinary commercial acceptation of the term.

3. **Customs Area.**—The Customs Area, to which all Oversea Trade statistics issued by this Bureau apply, is the whole area of the Commonwealth of Australia, comprising the States of New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania and the Northern Territory (contiguous territory). Other (non-contiguous) territories and mandated areas are treated as outside countries. Trade transactions between the Commonwealth and these non-contiguous territories are included in the oversea trade of the Commonwealth. Such transactions, however, are also registered separately, i.e., the trade of the Commonwealth with each particular country is separately recorded and tabulated.

4. **Statistical Classification of Imports and Exports.**—The Oversea Trade Bulletin No. 22 for the year 1924–25, from which the summary figures in this Year Book are extracted, was compiled according to a revised classification which came into operation on 1st July, 1922. In order to meet the demand for more detailed information relating to Imports and Exports the existing statistical classification was revised and considerably extended during the early part of 1922. The new classification is divided into 21 classes, with 1,458 separate Import items and 511 Export items.

5. **The Trade Year.**—From the 1st July, 1914, the statistics relating to Oversea Trade are shown according to the fiscal year (July to June). Prior to that date the figures showed the volume of trade during each calendar year.

6. **Records of Past Years.**—In the years preceding federation, each State independently recorded its trade, and in so doing did not distinguish other Australian States from foreign countries. As the aggregation of the records of the several States is necessarily the only available means of ascertaining the trade of Australia for comparison with later years, it is unfortunate that past records of values and the direction of imports and exports were not on uniform lines. The figures in the following table for years prior to federation have been carefully compiled and may be taken as representative of the oversea trade of Australia as a whole. On the introduction of the Customs Act 1901, the methods of recording values were made uniform throughout the States, but it was not until September, 1903, that a fundamental defect in the system of recording transhipped goods was remedied. Prior to 1905 the value of ships imported or exported was not included in the returns of trade.

7. **Ships' Stores.**—Prior to 1906 goods shipped in Australian ports on board oversea vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and omitted from the return of exports. A table showing the value of these stores shipped each year since 1906 is given later on in this Chapter.

§ 4. Oversea Trade.

1. **Total Oversea Trade.**—(i) *General.* The following table shows the total trade of the Commonwealth with oversea countries from the earliest date for which records are available. To economize space, the period 1826 to 1915–16 has been divided into

quinquennia, and the figures shown represent the annual averages for the quinquennia specified. The figures for individual years have been published in previous issues of the Year Book. (*a*)

OVERSEA TRADE.—AUSTRALIA, 1826 TO 1924–25.

Period.(*a*)	Recorded Value.			Value per Inhabitant.			Percentage of Exports on Imports.
	Imports.	Exports.	Total.	Imports.	Exports.	Total.	
	£1,000.	£1,000.	£1,000.	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	%
1826–30 ..	638	153	791	10 12 5	2 10 11	13 3 4	23.9
1831–35 ..	1,144	613	1,757	11 19 10	6 8 6	18 8 4	53.6
1836–40 ..	2,283	1,112	3,395	14 15 9	7 4 1	21 19 10	48.7
1841–45 ..	1,906	1,378	3,284	9 0 5	6 10 5	15 10 10	72.3
1846–50 ..	2,379	2,264	4,643	6 18 10	6 12 2	13 11 0	95.2
1851–55 ..	11,931	11,414	23,345	19 12 5	18 15 4	38 7 9	95.7
1856–60 ..	18,816	16,019	34,835	18 6 1	15 11 8	33 17 9	85.1
1861–65 ..	20,132	18,699	38,831	15 17 1	14 14 9	30 11 10	93.0
1866–70 ..	18,691	19,417	38,108	12 7 4	12 16 11	25 4 3	103.9
1871–75 ..	21,982	24,247	46,229	12 7 2	13 13 6	26 0 8	110.3
1876–80 ..	24,622	23,772	48,394	11 19 7	11 10 9	23 10 4	96.6
1881–85 ..	34,895	28,055	62,950	14 4 3	11 9 5	25 13 8	80.4
1886–90 ..	34,675	26,579	61,254	11 16 11	9 1 0	20 17 11	76.6
1891–95 ..	27,335	33,683	61,018	8 5 2	10 2 5	18 7 7	123.2
1896–1900	33,763	41,094	74,857	9 5 4	11 5 6	20 10 10	121.7
1901–5 ..	39,258	51,237	90,495	10 1 10	13 2 9	23 4 7	130.5
1906–10 ..	51,508	69,336(*b*)	120,844	12 4 8	16 9 11	28 14 7	134.6
1911–15–16	73,411	74,504	147,915	15 7 4	15 12 10	31 0 2	101·5
1916–17 ..	76,229	97,955	174,184	15 10 0	19 18 3	35 8 3	128.5
1917–18 ..	62,335	81,429	143,764	12 10 3	16 6 9	28 17 0	130.6
1918–19 ..	102,335	113,964	216,299	20 2 9	22 8 7	42 11 4	111.4
1919–20 ..	98,974	149,824	248,798	18 13 2	28 4 11	46 18 1	151.4
1920–21 ..	163,802	132,159	295,961	30 5 7	24 8 5	54 14 0	80.7
1921–22 ..	103,066	127,847	230,913	18 14 1	23 4 1	41 18 2	124.0
1922–23 ..	131,758	117,870	249,628	23 7 8	20 18 4	44 6 0	89.5
1923–24 ..	140,618	119,487	260,105	24 9 1	20 15 8	45 4 9	85.0
1924–25 ..	157,143	162,030	319,173	26 15 1	27 11 9	54 6 10	103.1

(*a*) The figures given for the years 1826 to 1915–16 represent the annual averages for the quinquennial periods. The trade of the individual years will be found in the Official Year Book No. 13 and earlier issues.
(*b*) Prior to 1906 ships' stores were included in the general exports. For value of these goods shipped each year since 1906 see later table.

The graphs of the movement of the oversea trade of Australia which accompany this Chapter show that periods of depressed trade have been recurrent at more or less regular intervals of from seven to nine years, and, measured by population, each succeeding depression since 1855 carried the trade per head lower than the preceding one, until the lowest point was reached in 1894. The heavy decline in the last-mentioned year was due to the acute financial stress which culminated in the financial crisis of 1893. There was a slight recovery in 1895, and a continuous upward movement until 1901. A decline, due to drought, in the exports of primary products, reduced the figures for 1902, but from this date until 1907 there was an increase. There was a falling-off in 1908 as compared with 1907, but from 1909 the value of imports and exports showed a steady increase until 1913, the year prior to the war. The trade of 1914–15 and subsequent years was seriously disturbed by the dislocation of shipping and increased prices arising out of war conditions. The shortage of shipping was particularly marked in 1917–18, when, in order to conserve space for more essential requirements, the importation of goods which were considered to be in the nature of luxuries was prohibited or restricted.

Shipping facilities having improved during 1918–19 the oversea trade of Australia increased rapidly. Imports and exports during that year show heavy increases compared with previous years. The value of imports declined during 1919–20, but exports increased enormously, the total reaching the high figure of £149,823,509.

(ii) *Trade Conditions, 1920–21.* During the year 1920–21 the value of imports increased considerably. This increase was largely due to the fulfilment of long standing orders which it had been impossible to execute earlier. In their anxiety to replenish stocks which had become depleted during the war, and to take advantage of the free spending of soldiers' gratuities and repatriation moneys, Australian importers ordered freely in the belief that their orders could not be satisfied immediately, but hoping to get a percentage thereof. The trade depression in Great Britain, and the cancellation of foreign orders, however, enabled British manufacturers to devote their attention to Australian orders, with the result that shipments, which it had been expected would be spread over a long period were received in quick succession. The rapidity with which the goods arrived created some difficulty in providing exchange, and the banks found it necessary to restrict credit for import business. The value of imports during 1920–21 reached the exceptionally high figure of £163,801,826, an amount greatly in excess of any previous year.

The decline in the value of exports during 1920–21 as compared with 1919–20 was mainly due to reduced exports of wool at lower prices, and to smaller exports of meats, flour, hides and skins, tallow, copper, and lead. As a set-off against these items there was an increase in the exports of wheat of nearly £12,000,000, and of butter of nearly £8,000,000.

(iii) *Trade in 1923–24.* The total oversea trade during the year 1923–24 was £260,105,457, as compared with £249,627,982 during the previous year. The increased trade was mainly due to imports. The balance of trade during the year was greatly in favour of imports, the value of which (£140,618,293) exceeded that of exports (£119,487,164) by £21 millions.

(iv) *Trade in 1924–25.* The oversea trade during 1924–25 amounted to £319,173,455, of which £157,143,296 represented imports and £162,030,159 exports. These figures are in excess of those for the previous year, and so far as total trade and exports are concerned are the highest recorded, while in one year only (1920–21) has the figure for imports been exceeded. The principal imports during 1924–25 were machinery and manufactures of metal, including motor cars and other vehicles (£45,594,102); and apparel, textiles and manufactured fibres (£42,372,272). Gold specie and bullion to the value of £10,506,333 were imported during the year. The principal exports of Australian origin were wool, £63,258,555; wheat, £34,613,713; butter, £10,006,081; flour, £6,186,275; meats, frozen, £6,160,676; sheepskins, £3,828,976; and rabbit and hare skins, £2,492,438.

2. **Ratio between Exports and Imports.**—The foregoing table shows the percentage of exports on imports for each quinquennial period from 1826–30 to 1911–15 and for each financial year since 1915–16. Prior to the quinquennial period 1891–95 the balance of trade, with two exceptions, due to temporary dislocations, had been on the side of imports, while from that period to 1919–20 the position was reversed. From the 1st July, 1920, to the end of June, 1925, there has been an excess of imports, though the results for each of those years have not been consistently in that direction.

The excess of imports in the earlier years represents the introduction of capital into Australia in the form of Government loans or for investment in private undertakings, and the excess of exports which appears for many subsequent years represents mainly the interest and profit on the earlier investments, repayments of loans to oversea bondholders, and freight on trade carried chiefly on vessels of the United Kingdom and foreign countries. As the introduction of new capital, and the payments for interest on existing investments and for shipping and other services are continually operating in opposite directions at the same time in the statistics of trade, it follows that it is the balance only of these transactions which is reflected in the excess of imports or exports.

Trade balances are further modified by the loans floated abroad by local governing bodies, by the imports of foreign capital for private enterprises, and by the addition to or the absorption of bank balances held in London on Australian account. Definite information regarding these items is not readily available. Other factors which affect trade balances to a certain extent are the financial arrangements made by immigrants to Australia and also by tourists in Australia from abroad. The purchase in Australian ports of bunker coal and other stores for vessels owned outside Australia is also a matter of some importance.

Against these items, however, account must be taken of the capital of persons emigrating from Australia and the travelling and other expenses of tourists from Australia to other parts of the world. These expenses would include fares on all steamers not owned in Australia, and since the termination of the war would represent very large sums, the total of which could not be readily ascertained.

The following table presents the balance of trade of Australia as shown by the records of imports and exports for each year since 1st July, 1914, and also the modifications of these figures by loans raised abroad by the Commonwealth and State Governments. In the exceptional circumstances arising from the war the excess of exports during this period is somewhat understated, as much of the wool exported appeared in the records at appraised rates, whereas sales effected later by the British Australian Wool Realization Association (B.A.W.R.A.) made considerable additions to the funds available in London on Australian account. Allowance has been made in the table for this increased value of wool exported. An approximation of Australia's annual liability for interest and services is also shown; any error in these figures will be in the direction of an understatement.

BALANCE OF AUSTRALIAN TRADE FROM 1st JULY, 1914, TO MARCH, 1926.

Year.	Recorded excess of Exports.	Increase in Public Debt (Commonwealth and State) raised abroad.	B.A.W.R.A. Dividends.	Total of Columns (2), (3), and (4).	Approximate annual obligations abroad for interest and services.	Addition to Funds available abroad for transmission to Australia.	
						For the Year.	Accumulated from 1st July, 1914.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000
1914–15 ..	− 3.8	5.1	..	1.3	16.0	−14.7	−14.7
1915–16 ..	− 3.0	4.3	..	1.3	17.2	−15.9	−30.6
1916–17 ..	21.7	18.6	..	40.3	18.4	21.9	− 8.7
1917–18 ..	19.1	20.9	..	40.0	22.0	18.0	9.3
1918–19 ..	11.6	.5	..	12.1	22.2	−10.1	− .8
1919–20 ..	50.8	10.8	..	61.6	23.2	38.4	37.6
1920–21 ..	−31.6	11.3	7.7	−12.6	24.3	−36.9	.7
1921–22 ..	24.8	42.2	9.9	76.9	26.7	50.2	50.9
1922–23 ..	−13.9	3.8	5.9	− 4.2	26.8	−31.0	19.9
1923–24 ..	−21.1	28.1	5.3	12.3	27.0	−14.7	5.2
1924–25 ..	4.9	.5	..	5.4	28.0	−22.6	−17.4
1925–26 (9 months)	1.0	31.4	..	32.4	22.0	10.4	− 7.0
Total ..	60.5	177.5	28.8	266.8	273.8	−7.0	..

§ 5. Direction of Trade.

1. **Imports according to Country of Origin.**—The following table shows the value of the imports into Australia stated to be the produce or manufacture of the undermentioned countries during the past five years :—

AUSTRALIAN IMPORTS.—COUNTRIES OF ORIGIN, 1920–21 TO 1924–25.

Country of Origin.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
United Kingdom	76,849,934	53,001,926	68,394,423	63,607,743	*c* 69,047,807
British Possessions—					
Canada	4,425,262	3,146,450	5,064,253	5,046,519	3,384,712
Ceylon	838,340	1,009,477	1,001,412	1,251,392	1,587,738
India	7,312,832	3,747,023	4,393,685	4,800,086	6,423,364
Malaya (British)	284,886	571,544	272,759	494,930	612,314
New Zealand	1,995,897	1,702,991	2,003,307	2,514,225	2,196,566
Pacific Islands—					
Fiji	204,775	217,248	116,290	61,866	26,241
Territory of New Guinea ..	635,370	619,537	418,420	99,588	261,032
Other Islands	988,085	907,547	777,085	988,449	1,133,488
Papua	325,773	163,232	209,193	471,953	295,199
South African Union	534,118	356,869	758,720	1,052,156	5,197,215
Other British Possessions (*a*) ..	891,150	565,213	608,210	739,198	527,017
Total British Possessions ..	18,436,488	13,007,131	15,623,334	17,520,362	21,644,886
Total British Countries ..	95,286,422	66,009,057	84,017,757	81,128,105	90,692,693
Foreign Countries—					
Belgium	1,929,647	950,952	906,050	902,534	901,324
China	1,034,306	950,772	873,579	925,045	751,960
France	3,597,811	2,731,739	3,231,197	4,101,137	4,216,457
Germany	56,944	85,976	593,812	1,368,904	2,259,691
Italy	828,217	944,226	1,174,489	1,242,790	1,506,383
Japan	5,230,039	3,581,614	3,936,150	3,557,834	4,146,234
Netherlands	613,926	498,824	580,888	597,682	705,880
Netherlands East Indies ..	8,798,957	3,236,970	4,361,302	4,607,681	5,640,881
Norway	1,920,997	848,134	1,686,439	1,415,339	1,458,112
Pacific Islands	152,938	119,127	94,884	86,471	127,402
Philippine Islands	209,170	151,106	168,742	170,135	249,168
Sweden	2,751,827	1,238,327	1,629,515	2,031,872	1,638,004
Switzerland	2,016,156	1,836,291	2,189,854	2,274,296	2,327,565
United States of America ..	36,113,477	18,823,113	24,851,303	34,556,529	38,728,814
Other Foreign Countries(*b*) ..	3,260,992	1,060,208	1,461,874	1,651,939	1,792,728
Total Foreign Countries ..	68,515,404	37,057 379	47,740,078	59,490,188	66,450,603
Total	163,801,826	103,066,436	131,757,835	140,618,293	157,143,296

(*a*) Includes Egypt during the years 1920–21 and 1921–2.
(*b*) Includes Egypt during the years 1922–23, 1923–24, and 1924–25.
(*c*) Exclusive of Irish Free State.

The value of imports into Australia fluctuated considerably during the five years under review. Imports increased abnormally during 1920–21, when the value reached the exceptionally high figure of 164 millions. The enhanced price of commodities and the peculiar conditions affecting Australian trade were responsible for the high value of imports during this year, and in making comparisons with imports during pre-war years these facts should be taken into consideration. The exceptional conditions affecting Australian trade during 1920–21 have already been mentioned in a previous paragraph.

Compared with 1920–21 the value of imports during 1921–22 showed a decrease of over 60 millions. This heavy decline was partly due to the exceptional importations of the previous year and partly to the lower prices of commodities during the later year. Imports in 1922–23 were greatly in excess of those for 1921–22, but the total value of the commodities imported during the year was 32 millions less than in 1920–21. The heavy importation of goods continued during 1923–24 and 1924–25. The value of imports during the last year reached the high figure of 157 millions, which has been exceeded in 1920–21 only.

In view of the effect that the varying prices of commodities had upon the value of imports during the period dealt with it is somewhat difficult to ascertain from the preceding table the relative importance of the various countries in the import trade of Australia. A better idea of the proportion of imports supplied by each country during each year may be obtained from the following table of percentages.

2. **Percentage of Imports from Various Countries.**—The following table gives the relative proportions of the import trade of Australia which have been supplied by the various countries, together with the proportions furnished by the United Kingdom, British Possessions and foreign countries respectively.

AUSTRALIAN IMPORTS.—PERCENTAGES FROM COUNTRIES OF ORIGIN, 1920–21 TO 1924–25.

Country of Origin.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	per cent.	per cent.	per cent.	per cent.	per cent.
United Kingdom	46.92	51.43	51.90	45.24	43.93
British Possessions—					
Canada	2.70	3.05	3.84	3.59	2.15
Ceylon	0.51	0.98	0.76	0.89	1.01
India	4.46	3.64	3.33	3.41	4.09
Malaya (British)	0.17	0.55	0.21	0.35	0.39
New Zealand	1.22	1.65	1.52	1.79	1.40
Pacific Islands—					
Fiji	0.12	0.21	0.09	0.04	0.02
Territory of New Guinea ..	0.39	0.60	0.32	0.07	0.17
Other Islands	0.60	0.88	0.58	0.70	0.72
Papua	0.21	0.16	0.16	0.34	0.19
South African Union ..	0.33	0.35	0.58	0.75	3.31
Other British Possessions[a] ..	0.54	0.55	0.46	0.53	0.33
Total British Possessions ..	11.25	12.62	11.85	12.46	13.78
Total British Countries ..	58.17	64.05	63.75	57.70	57.71
Foreign Countries—					
Belgium	1.18	0.92	0.69	0.64	0.57
China	0.63	0.92	0.67	0.66	0.48
France	2.20	2.65	2.45	2.92	2.68
Germany	0.04	0.08	0.45	0.97	1.44
Italy	0.51	0.91	0.89	0.88	0.96
Japan	3.19	3.48	2.99	2.53	2.64
Netherlands	0.37	0.48	0.44	0.42	0.45
Netherlands East Indies ..	5.37	3.14	3.31	3.28	3.59
Norway	1.17	0.82	1.28	1.01	0.93
Pacific Islands	0.09	0.12	0.07	0.06	0.08
Philippine Islands	0.13	0.15	0.13	0.12	0.16
Sweden	1.68	1.20	1.24	1.44	1.04
Switzerland	1.23	1.78	1.66	1.62	1.48
United States of America ..	22.05	18.27	18.87	24.58	24.65
Other Foreign Countries[b] ..	1.99	1.03	1.11	1.17	1.14
Total Foreign Countries ..	41.83	35.95	36.25	42.30	42.29
Total	100	100	100	100	100

(a) Includes Egypt during the years 1920–21 and 1921–22.
(b) Includes Egypt during the years 1922–23, 1923–24, and 1924–25.

The percentage of imports from the United Kingdom increased during the first three years of the quinquennial period under review, the proportion increasing from 46.92 per cent. in 1920–21 to 51.90 per cent. in 1922–23. A noticeable decline in the percentage therefrom occurred, however, in 1923–24, the proportion being 45.24 per cent., a decrease of 6.66 per cent. compared with 1922–23. There was a further decline in 1924–25 when the imports of United Kingdom origin represented 43.93 per cent. of the total imports. Whilst the proportion of imports from the United Kingdom declined, that from the United States increased from 18.87 per cent. in 1922–23 to 24.58 per cent. in 1923–24. The value of imports from the last-mentioned country was £38,728,814 during 1924–25, as compared with £34,556,529 during 1923–24. The corresponding figures for the United Kingdom were £69,047,807 in 1924–25 and £63,607,743 in 1923–24. The proportion of the total imports supplied by the United States during 1924–25 was 24.65 per cent., which is slightly higher than the proportion supplied during the preceding year. It is of interest to note, however, that imports of merchandise from the United States declined, as the figures for the year 1924–25 include gold specie and bullion valued at £5,628,334. The noticeable increase in the proportion of imports supplied by the South African Union was due to imports of gold valued at £4,725,342. Imports from Germany increased from £1,368,904 in 1923–24 to £2,259,691 in 1924–25. There have been no outstanding alterations in the proportions of the imports supplied by other countries. Comparing the proportion of imports supplied by the United Kingdom during 1924–25 with that for 1922–23 it will be seen that there was a reduction of 7.97 per cent. Of this loss of trade British Possessions supplied 1.93 per cent., while the balance (6.04 per cent.) was supplied by foreign countries.

3. **Direction of Exports.**—The following tables show a decreasing proportion of Australian exports to the United Kingdom, and increasing proportions to France, Italy, Germany, Netherlands, and Japan. The reservation to the United Kingdom of the first call on Australian primary products increased the proportion of exports to that country during the war period, but since the termination of the war there has been an increasing tendency towards direct shipment of the more important commodities, such as wool, skins, wheat, flour, butter, etc., to the consuming countries. The value of exports shipped to the United States during 1923–24 showed a considerable decrease compared with the previous years. The figures show an upward trend during 1924–25, principally due to large shipments of wool. The value of imports from United States generally exceeds the value of exports from Australia to that country, but the difference has been very marked during 1923–24 and 1924–25, when the value of imports from United States has been no less than 27 and 29 millions respectively in excess of the value of the Australian exports. The following table shows the value of exports from Australia to the more important countries during the five years 1920–21 to 1924–25 :—

EXPORTS FROM AUSTRALIA TO VARIOUS COUNTRIES, 1920–21 TO 1924–25.

(INCLUDING BULLION AND SPECIE.)

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
United Kingdom	67,519.740	57,742,767	51,975,381	45,508,323	69,147,229
British Possessions—					
Canada	154,899	373,570	364,732	235,947	716,953
Ceylon	299,131	711,163	814 435	2,453,465	831,911
Egypt	6,607,172	3,523,355	(*a*)	(*a*)	(*a*)
Fiji	732,251	573,401	352,744	389,059	435,072
Hong Kong	866,839	536,596	501,874	776,998	635,174
India	2,193,006	6,770,067	3,107,584	1,201,777	2,002,562
Malaya (British)	2,121,090	1,876,648	1,343,029	1,549,220	1,528,303
Mauritius	117,554	145,352	134,997	126,586	123,299
New Zealand	7,780,763	4,619,655	4,302,281	5,008,152	5,812,565
Papua	292,851	172,419	219,225	214,839	259,302
South African Union	3,049,507	1,660,359	1,967,861	2,046,099	2,657,232
Other British Possessions ..	1,701,305	880,614	977,326	966,503	1,810,629
Total British Possessions ..	25,916,368	21,843,199	14,086,088	14,968,645	16,813,002
Total British Countries ..	93,436,108	79,585,966	66,061,469	60,476,968	85,960,231
Foreign Countries—					
Belgium	6,845,925	5,015,976	4,299,926	6,524,169	7,182,703
Chile and Peru	227,037	227,538	197,845	168,119	232,422
China	328,087	509,339	278,121	1,947,030	524,812
Egypt	..	..	(*b*)1,583,785	2,321,083	3,008,741
France	6,409,862	8,701,179	12,296,665	14,888,846	19,932,721
Germany	1,457,119	4,003,726	4,186,864	4,402,913	7,372,049
Italy	2,547,810	8,047,291	5,950,726	4,633,185	10,014,185
Japan	3,117,572	7,952,547	9,309,560	11,555,484	11,646,516
Netherlands	1,264,530	765,725	640,818	1,911,114	1,819,371
Netherlands East Indies ..	2,568,619	2,368,197	1,862,864	1,602,013	2,045,882
Norway	170,532	300,389	47,696	34,275	122,812
Pacific Islands	757,541	482,666	451,280	367,784	407,162
Philippine Islands	420,870	565,063	568,648	523,618	529,405
Spain	287,669	354,405	932	317,034	466,517
Sweden	136,500	25,180	168,112	409,466	470,006
United States of America ..	9,965,575	8,314,386	9,630,770	7,109,496	9,153,279
Other Foreign Countries ..	2,217,556	626,962	334,066	294,567	1,141,345
Total Foreign Countries ..	38,722,804	48,260,569	51,808,678	59,010,196	76,069,928
Total	132,158,912	127,846,535	117,870,147	119,487,164	162,030,159

(*a*) Now recorded under Foreign Countries. (*b*) Previously recorded under British Possessions.

4. Percentage of Exports to Various Countries.—The next table gives the relative proportions of the export trade of Australia with the countries specified, together with the proportions shipped to the United Kingdom, British Possessions and foreign countries respectively :—

EXPORTS FROM AUSTRALIA.—PERCENTAGES TO VARIOUS COUNTRIES, 1920–21 TO 1924–25.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	per cent.	per cent.	per cent.	per cent.	per cent.
United Kingdom	51.10	45.16	44.10	38.09	42.67
British Possessions—					
Canada	0.12	0.29	0.31	0.20	0.44
Ceylon	0.22	0.56	0.69	2.05	0.51
Egypt	5.01	2.76	(*a*)	(*a*)	(*a*)
Fiji	0.53	0.45	0.30	0.32	0.27
Hong Kong	0.65	0.42	0.43	0.65	0.39
India	1.66	5.30	2.64	1.01	1.24
Malaya (British)	1.61	1.47	1.14	1.30	0.94
Mauritius	0.09	0.11	0.11	0.11	0.08
New Zealand	5.90	3.61	3.65	4.19	3.59
Papua	0.22	0.13	0.19	0.18	0.16
South African Union ..	2.31	1.30	1.67	1.71	1.64
Other British Possessions ..	1.29	0.69	0.83	0.81	1.12
Total British Possessions ..	19.61	17.09	11.96	12.53	10.38
Total British Countries ..	70.71	62.25	56.06	50.62	53.05
Foreign Countries—					
Belgium	5.18	3.92	3.65	5.46	4.43
Chile and Peru	0.17	0.18	0.17	0.14	0.14
China	0.25	0.40	0.24	1.63	0.32
Egypt	..	..	(*b*)1.34	1.94	1.86
France	4.86	6.81	10.43	12.36	12.30
Germany	1.10	3.13	3.55	3.68	4.55
Italy	1.93	6.29	5.05	3.88	6.18
Japan	2.36	6.22	7.90	9.67	7.19
Netherlands	0.96	0.60	0.54	1.60	1.12
Netherlands East Indies ..	1.94	1.85	1.58	1.34	1.26
Norway	0.12	0.24	0.04	0.03	0.08
Pacific Islands	0.57	0.38	0.38	0.31	0.25
Philippine Islands	0.32	0.44	0.48	0.44	0.33
Spain	0.21	0.28	0.00	0.27	0.29
Sweden	0.10	0.02	0.14	0.34	0.29
United States of America ..	7.55	6.50	8.17	5.95	5.65
Other Foreign Countries ..	1.67	0.49	0.28	0.24	0.71
Total Foreign Countries ..	29.29	37.75	43.94	49.38	46.95
Total	100	100	100	100	100

(*a*) Now recorded under Foreign Countries. (*b*) Previously recorded under British Possessions.

5. Principal Imports and Exports—Countries.—The total value of imports from and exports to, each of the more important countries in order of value of total trade, together with brief particulars of the principal commodities interchanged with such countries are given hereunder. Should further details be required reference may be made to the annual publication "Oversea Trade Bulletin, No. 22," issued by this Bureau, which gives details of the trade of 38 of the principal countries of the world with Australia during the past five years. This publication also furnishes information regarding the country of origin of each statistical item of imports for the years 1923–24 and 1924–25, showing the value and (where available) the quantity imported from each country. The value of each item imported into each State of the Commonwealth is also shown. The publication referred to also gives information as to the country to which each item of exports was shipped during the years 1923–24 and 1924–25.

United Kingdom. Total Imports of United Kingdom Origin, £69,047,807. The two outstanding classes of goods imported were—Apparel, textiles, yarns, etc., £26,782,623, and machines, machinery and manufactures of metal, £24,627,221. Imports of the undermentioned goods also contributed largely to the total:—Whisky; china and earthenware; paper and stationery; drugs and chemicals; fancy goods; and vessels (ships).

Total Exports to United Kingdom, £69,147,229. Of this total £68,624,881 represented Australian produce. The principal items of export were—Wool, £24,387,811; wheat, £13,152,367; and butter, £8,985,987. Other commodities which bulked largely were—Frozen beef, mutton and lamb; cheese; maize; flour; fruits, fresh and dried; sugar (cane); hides and skins; cotton, raw; tallow; leather; copper; lead; tin; and zinc.

United States of America. Total Imports of United States Origin, £38,728,814. The following were the more important items of import:—Tobacco, manufactured and unmanufactured, £1,999,782; petroleum spirit, benzine, £3,210,270; motor chassis, bodies, etc., £7,295,154; rubber and rubber manufactures, £1,251,200; undressed timber, £1,972,955; gold specie and bullion, £5,628,334; apparel, textiles, etc.; kerosene, lubricating and other oils; electrical machinery, materials and appliances; printing machinery; manufactures of metals; musical instruments; films for kinematographs; sulphur; preserved fish; gums and resins; leather; sausage casings; and paper and stationery.

Total Exports to United States, £9,153,279. Of this total £9,034,128 represented Australian produce. The principal exports were—Wool, £5,926,430; hides and skins, £2,349,209; pearlshell; sausage casings; and tin. The value of the above commodities represents 97 per cent. of the total exports to the United States.

France. Total Imports of French Origin, £4,216,457. Chief imports were—Piece goods of silk or containing silk, £1,022,890; trimmings for attire, £272,080; motor cars and parts, £371,857; lace for attire; brandy; wine; rubber manufactures; cream of tartar; perfumery and toilet preparations; fancy goods; tobacco-pipes; gloves; olive oil; apparel and attire; and paper manufactures

Total Exports to France, £19,932,721. Of this total £19,673,458 was Australian produce. Principal exports were—Wool, £12,487,340; wheat, £5,055,175; sheep skins, £1,723,796; butter; copra; concentrates; zinc; and beef.

Japan. Total Imports of Japanese Origin, £4,146,234. Principal imports—Piece goods of silk or containing silk, £2,241,173; cotton and linen piece goods, £708,011; china and porcelain ware; glass and glassware; undressed timber; fancy goods; brushware; apparel and attire; and oils.

Total Exports to Japan, £11,646,516. Of this total £11,599,211 was Australian produce. Chief exports—Wool, £7,479,586; wheat, £2,228,549; tallow; pig lead; zinc; trochus shell; milk and cream; and hides and skins.

Italy. Total Imports of Italian Origin, £1,506,383. Chief imports were—Motor cars and parts, £444,882; silk piece goods, £202,840; edible nuts, £67,564; hats, £119,704; essential oils; flax and hemp; marble; hides and skins; pneumatic tyres; and paper and stationery.

Total Exports to Italy, £10,014,185. Of this total, £9,967,534 was Australian produce. Chief exports were—Wheat, £5,334,520 ; wool, £3,327,166 ; tallow, £210,222 ; hides and skins, £334,863 ; beef, £725,510 ; copra ; and zinc.

Germany. Trade with Germany was suspended on the outbreak of war, and importation of German goods, except by permits granted by the Minister for Trade and Customs was not permitted until the 1st August, 1922. Imports from Germany during 1924–25 were valued at £2,259,691. Chief items were—Apparel and textiles, £561,080 ; machinery and metal manufactures, £431,986 ; pianos, £420,540 ; paper and stationery, £93,273 ; toys, £134,764 ; timepieces ; fancy goods ; fertilizers ; and musical instruments. Exports to Germany amounted to £7,372,049. Of this total £7,310,913 was the produce of Australia. Chief exports were—Beef, £105,496 ; hides and skins, £410,580 ; wool, £4,929,589 ; silver and silver-lead ore and concentrates, £185,683 ; pig-lead, £121,500 ; zinc—bars, blocks, etc., £194,000 ; wheat, £1,002,004 ; butter substitutes ; sausage casings ; copra , and tallow.

India. Total Imports of Produce or Manufacture of India, £6,423,364. Bags and sacks valued at £4,036,310 represent 63 per cent. of the total imports. The other principal items were—Hessians ; rice ; tea ; hides and skins ; linseed ; paraffin wax ; gums and resins ; precious stones , coffee and chicory ; and spices.

Total Exports to India, £2,002,562. Of this total £1,997,205 represented Australian produce. The chief exports were—Gold specie, £373,863 ; silver, £1,002,880 ; undressed timber ; coal ; copper ; tallow ; jams and jellies ; preserved milk and cream ; horses ; and wool.

Belgium. Total Imports of Belgian Origin, £901,324. Principal imports were—Motor cars and parts, £51,077 ; glass and glassware, £376,496 ; cotton and linen piece goods, £79,413 ; apparel and textiles ; cameos and precious stones (unset) ; iron and steel ; and paper.

Total Exports to Belgium, £7,182,703. Of this total £7,178,592 was the produce of Australia. Chief items were—Wool, £3,844,335 ; wheat, £1,527,606 ; hides and skins, £157,638 ; zinc concentrates, £510,822 ; silver and silver-lead ore and concentrates, £360,417 ; barley, £135,112 ; beef, £366,488 ; butter, £68,321 ; tallow, £48,108 ; and zinc—bars, blocks, etc., £45,500.

New Zealand. Total Imports of New Zealand Origin, £2,196,566. The principal items were—Timber, £596,224 ; hides and skins, £439,475 ; wool, £317,354 ; flax and hemp ; oakum and tow ; linseed and other seeds ; fish ; meats ; horses ; and grain and pulse.

Total Exports to New Zealand, £5,812,565. Of this total £4,744,922 was Australian produce. The chief items were—Apparel, textiles and manufactured fibres, £199,562 ; machinery and metal manufactures, £531,559 ; coal, £647,706 ; manufactured tobacco, £322,983 ; undressed timber, £688,109 ; wheat, £721,934 ; rubber manufactures ; leather ; dried and fresh fruits ; confectionery ; and medicines. The remaining exports covered a very large range of commodities and included a number of items not the produce of Australia, such as spirits, rice, tea, paints, dyes, glassware, earthenware, etc.

South African Union. Total Imports of Produce of South African Union, £5,197,215. Principal items were—Gold, £4,725,342 ; precious stones, £318,611 ; fish, £69,610 ; tanning bark ; fibres and seeds ; feathers ; and tobacco.

Total Exports to South African Union, £2,657,232. Of this total £2,653,159 was the produce of Australia. Chief exports were—Wheat, £1,183,477 ; flour, £364,411 ; undressed timber, £558,593 ; butter, £96,596 ; milk and cream, £178,050 ; tallow, £78,790 ; dried fruits ; sheep ; leather ; and soap.

Netherlands East Indies. Total Imports of Netherlands East Indies Origin, £5,640,881. The principal imports were—Petroleum spirit, including benzine, etc., £2,168,643 ; tea, £2,010,328 ; kerosene ; crude petroleum ; crude rubber ; kapok ; coffee and chicory ; spices ; tobacco ; and flax and hemp.

Total Exports to Netherlands East Indies, £2,045,882. Of this total £2,034,637 was the produce of Australia. Chief exports were—Flour, £644,107 ; butter, £449,829 ; preserved milk and cream ; coal ; leather ; bacon and hams ; biscuits ; and soap.

Canada. Total Imports of Canadian Origin, £3,384,712. The principal imports were—Chassis for motor cars, £1,268,039; bodies for motor cars, £32,464; wrapping paper, £93,757; undressed timber, £174,123; rubber manufactures, £268,947; preserved fish, £306,339; apparel and textiles; agricultural implements; corsets; metal manufactures; other paper and stationery.

Total Exports to Canada, £716,953. Of this total £708,987 was Australian produce. Chief items were—Sugar (cane), £319,820; wool—greasy, scoured, and tops, £162,395; meats; maize; and hides and skins.

Pacific Islands (British and Foreign). Total Imports of Produce of the Pacific Islands, £1,548,163. Chief items were—Copra, £467,439; rock phosphates, £739,588; sugar, molasses, etc.; cocoa beans; cattle hides; and guano.

Total Exports to Pacific Islands, £1,668,983. Of this amount £1,049,940 was the produce of Australia. The exports to these islands cover a very wide range of commodities. The outstanding groups were—Foodstuffs of vegetable origin, £455,095; apparel, textiles, etc., £171,480; coal and coke, £147,369; machines, machinery and metal manufactures, £214,402; foodstuffs of animal origin, £125,294; and tobacco, cigars, and cigarettes, £114,788. The chief individual items were—Butter; meats; biscuits; flour; rice; sugar; potatoes; tea; ale and porter; spirits; tobacco and cigarettes; canvas and duck; cotton piece goods; kerosene; undressed timber; soap; and fertilizers.

Egypt. Total Imports of Egyptian Origin, £13,777. Chief items were—Gums and resins, £4,805; cigarettes, £1,804; and hides and skins, £2,277.

Total Exports to Egypt, £3,008,741. Principal items were—Flour, £2,287,170; wheat, £544,521; frozen meat, £119,616; and butter, £41,364.

Netherlands. Total Imports of Netherlands Origin, £705,880. Principal items were—Metal manufactures; piece goods; cocoa and chocolate; paper; gin and schnapps; jewellery; electrical machinery; and paints and colours.

Total Exports to Netherlands, £1,819,371. Chief exports were—Wool, £367,651; copra, £91,128; flour, £48,159; wheat, £1,164,843; hides and skins, £26,065; and tallow, £61,014.

Ceylon. Total Imports of Ceylon Origin, £1,587,738. The chief items were—Tea, £1,362,975; nuts, £92,350; crude rubber, £47,198; cocoa beans; fibres; and yarns.

Total Exports to Ceylon, £831,911. Of this total £827,705 was Australian produce. The principal exports were—Gold specie, £350,083; gold—bar, dust, ingot, sheet, £152,154; flour, £143,010; undressed timber; butter; preserved milk; silver; and preserved meats.

Switzerland. Total Imports of Swiss Origin, £2,327,565. Chief items were—Piece goods of silk, £742,390; trimmings and ornaments for attire, £355,772; lace for attire; clocks and watches; grass straw for manufacture of hats; handkerchiefs; and other apparel and textiles.

Total Exports to Switzerland, £4,140. Chief item was—timepieces and parts, £3,312.

Malaya (British). Total Imports of (British) Malayan Origin, £612,314. Principal items were—Rubber and manufactures of, £398,844; sago and tapioca, £63,204; spices, £87,761; resins; tea; and bamboo and cane.

Total Exports to Malaya (British), £1,528,303. Of this total, £1,503,402 was the produce of Australia. Chief exports were—Preserved milk and cream, £511,077; flour, £444,257; mining machinery, £120,843; butter, £75,814; coal, £43,881; soap, £43,894; bacon and ham; preserved and frozen meat; leather; and sandalwood.

Sweden. Total Imports of Swedish Origin, £1,638,004. Chief items were—Printing paper, £205,958; cream separators, £140,818; wood pulp, £146,385; dressed and undressed timber, £369,885; electrical machinery and appliances, £37,711; wrapping and other paper, £279,917; and matches, £212,000.

Total Exports to Sweden, £470,006. Chief items were—Wool, £50,800; wheat, £369,486; hides—cattle, £29,200.

Norway. Total Imports of Norwegian Origin, £1,458,112. Principal items were—Paper, £416,589; timber, dressed and undressed, £643,421; preserved fish, £295,603; wood pulp, £25,255; and ores, clays, etc., £20,368.

Total Exports to Norway, £122,812. Of this total the principal items were wheat, £108,068; and wool, £7,408.

China. Total Imports of Chinese Origin, £751,960. The principal items were—Silk piece goods, £46,877; lace for attire, £36,148; rice, £61,378; tea, £97,291; edible nuts, £64,460; ginger, £47,891; oils; raw cotton; grass straw; and hair and fibre.

Total Exports to China, £524,812. Of this total £519,873 was Australan produce. Principal items were—Silver—bar, ingot, etc., £69,684; butter, £64,879; sandalwood, £53,031; tallow, £59,973; leather, £82,838; pig lead, £84,512; and milk and cream, £40,320.

Philippine Islands. Total Imports of Philippine Islands Origin, £249,168. Chief items were—Hemp, £125,552; timber, £102,321; and tobacco and cigars.

Total Exports to Philippine Islands, £529,405. Principal items were—Frozen meats, £115,747; flour, £149,755; coal, £104,046; butter; bacon and ham; cattle; and wire, barbed.

Hong Kong. Total Imports of Hong Kong Origin, £3,742. Chief items were—Cigars and grass straw.

Total Exports to Hong Kong, £635,174. Chief items were—Flour, £181,599; sandalwood, £113,551; butter, £45,271; preserved milk and cream, £36,333; pig lead, £65,424; leather and manufactures thereof, £101,892; jams and jellies; bacon and ham; frozen meat; tallow; and fish.

Spain. Total Imports of Spanish Origin, £156,459. Chief items were—Corks, etc., £72,073; edible nuts, £41,353; liquorice; raisins; and wine.

Total Exports to Spain, £466,517. Chief item was wheat, £466,050.

Russia. Total Imports of Russian Origin, £35,418. Chief items were—Hair and fibre; furs; and drugs.

Total Exports to Russia, £8.

6. **Imports—States, and Total.**—Imports are recorded at the port of landing and are credited to the State in which the port is situated. Records are not obtainable of interstate trade, and the State totals represent, therefore, the value of oversea goods consigned to the various States. They do not, moreover, represent the consumption within each State. Figures for the last five years are given hereunder.

IMPORTS.—STATES, AND TOTAL, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
New South Wales ..	72,466,306	43,321,478	55,010,083	58,225,180	66,321,757
Victoria	57,608,777	36,352,056	46,729,100	49,592,643	54,289,690
Queensland.. ..	11,840,442	8,639,446	10,782,906	11,605,668	12,833,375
South Australia ..	12,381,973	9,047,242	10,846,619	12,700,321	13,970,327
Western Australia ..	7,219,538	4,308,141	6,788,165	6,662,729	8,026,452
Tasmania	2,264,933	1,385,958	1,588,158	1,817,320	1,681,059
Northern Territory ..	19,857	12,115	12,804	14,432	20,636
Total	163,801,826	103,066,436	131,757,835	140,618,293	157,143,296

7. **Exports—States, and Total.**—The following table gives the value of exports shipped from each State during the last five years. It must be noted that the value of goods transferred from one State to another for shipment to oversea countries is shown as an export from the State from which the goods were finally despatched.

EXPORTS.—STATES, AND TOTAL, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
New South Wales ..	52,601,798	48,012,511	42,581,874	43,146,722	60,577,094
Victoria	34,871,961	34,644,182	33,768,701	29,612,548	41,641,979
Queensland.. ..	15,171,884	17,573,103	15,782,072	14,628,305	24,441,600
South Australia ..	17,773,919	14,747,260	13,583,003	16,912,932	19,225,027
Western Australia ..	10,395,015	10,797,000	9,679,496	12,412,625	12,859,498
Tasmania	1,329,583	2,067,443	2,460,374	2,766,032	3,243,017
Northern Territory ..	14,752	5,036	14,627	8,000	41,944
Total	132,158,912	127,846,535	117,870,147	119,487,164	162,030,159

8. **Trade of Principal Ports.**—The next table gives the value of imports received at, and exports despatched from, the principal ports of Australia during 1923–24 and 1924–25.

OVERSEA TRADE.—PRINCIPAL PORTS, 1923–24 AND 1924–25.

Port.	1923–24.			1924–25.		
	Imports.	Exports.	Total.	Imports.	Exports.	Total.
New South Wales.	£	£	£	£	£	£
Sydney	56,691,354	40,916,746	97,608,100	64,701,308	58,300,367	123,001,675
Newcastle ..	1,496,109	2,124,501	3,620,610	1,564,825	2,201,357	3,766,182
Other Ports ..	37,717	105,475	143,192	55,624	75,370	130,994
Total ..	58,225,180	43,146,722	101,371,902	66,321,757	60,577,094	126,898,851
Victoria.						
Melbourne ..	48,967,249	26,581,946	75,549,195	53,604,514	35,374,263	88,978,777
Geelong	522,075	2,226,626	2,748,701	565,868	4,398,176	4,964,044
Other Ports ..	103,319	803,976	907,295	119,308	1,869,540	1,988,848
Total ..	49,592,643	29,612,548	79,205,191	54,289,690	41,641,979	95,931,669
Queensland.						
Brisbane ..	10,012,563	12,568,268	22,580,831	10,864,222	18,859,472	29,723,694
Rockhampton ..	431,849	480,448	912,297	490,292	1,180,869	1,671,161
Townsville ..	677,513	833,859	1,511,372	846,152	1,970,706	2,816,858
Other Ports ..	483,743	745,730	1,229,473	632,709	2,430,553	3,063,262
Total ..	11,605,668	14,628,305	26,233,973	12,833,375	24,441,600	37,274,975
South Australia.						
Port Adelaide, including Adelaide	12,470,826	10,607,980	23,078,806	13,703,137	12,249,249	25,952,386
Port Pirie ..	165,841	3,242,547	3,408,388	239,271	3,350,851	3,590,122
Wallaroo ..	63,654	2,073,163	2,136,817	27,919	2,335,564	2,363,483
Other Ports ..	..	989,242	989,242	..	1,289,363	1,289,363
Total ..	12,700,321	16,912,932	29,613,253	13,970,327	19,225,027	33,195,354
Western Australia.						
Fremantle (Perth)	6,468,590	9,713,068	16,181,658	7,810,845	9,605,218	17,416,063
Bunbury ..	37,144	1,126,976	1,164,120	39,724	1,425,963	1,465,687
Other Ports ..	156,995	1,572,581	1,729,576	175,883	1,828,317	2,004,200
Total ..	6,662,729	12,412,625	19,075,354	8,026,452	12,859,498	20,885,950

OVERSEA TRADE.—PRINCIPAL PORTS, 1923–24 AND 1924–25—*continued.*

Port.	1923–24.			1924–25.		
	Imports.	Exports.	Total.	Imports.	Exports.	Total.
	£	£	£	£	£	£
Tasmania.						
Hobart	1,068,772	1,961,998	3,030,770	927,626	2,321,940	3,249,566
Launceston ..	679,253	643,630	1,322,883	701,373	643,495	1,344,868
Other Ports ..	69,295	160,404	229,699	52,060	277,582	329,642
Total ..	1,817,320	2,766,032	4,583,352	1,681,059	3,243,017	4,924,076
Northern Territory.						
Port Darwin ..	14,432	8,000	22,432	20,636	41,944	62,580
Grand Total	140,618,293	119,487,164	260,105,457	157,143,296	162,030,159	319,173,455

§ 6. Exports to Eastern Countries.

1. Principal Articles Exported.—The following table shows the value of exports from Australia to Eastern countries during the last five years. The principal countries concerned in this trade are China, India and Ceylon, Japan, Netherlands East Indies and Timor (Portuguese), Philippine Islands, Malaya (British), and Hong Kong. The particulars given in the tables apply to these countries only.

EXPORTS FROM AUSTRALIA TO EASTERN COUNTRIES.—PRINCIPAL COMMODITIES, 1920–21 TO 1924–25.

Article.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Antimony	160	683	298	..	..
Biscuits	127,573	86,187	62,197	62,371	63,233
Butter	700,283	760,581	780,325	678,384	698,365
Cheese	30,104	19,036	11,527	10,295	8,029
Coal	863,165	422,323	397,632	357,230	258,561
Copper	212,466	4,239	22,350	51,546	14,170
Grain and Pulse					
Wheat	13,881	6,243,878	986,596	3,996,125	2,229,079
Flour	628,274	1,413,859	1,353,990	1,618,877	1,576,034
Other (prepared and unprepared) ..	109,465	47,693	9,882	33,864	16,345
Hay, chaff, and compressed fodder ..	24,659	22,110	18,576	21,272	22,787
Horses	154,235	40,382	82,834	21,713	93,077
Iron and Steel (unmanufactured) ..	67,961	1,527	4,472	618	601
Jams and Jellies	158,092	81,299	59,613	67,377	60,965
Lead, Pig	32,701	347,963	644,848	533,770	554,082
Leather	282,738	217,185	242,681	366,578	330,393
Meats	587,907	545,659	397,005	426,174	399,315
Milk and cream	944,021	1,305,277	1,140,775	1,002,687	1,385,142
Pearl shell and trochus shell ..	43,880	50,779	56,531	37,300	63,696
Sandalwood	194,591	75,556	110,822	357,025	205,477
Skins, hoofs, horns, bones, sinews, tallow	439,270	601,077	523,619	648,012	804,308
Sulphate of ammonia	126,639	83,346	47,249	34,053	38,411
Timber (undressed)	151,059	182,032	87,161	195,742	56,269
Wool	2,161,707	4,535,541	6,124,687	6,343,014	7,609,507
Other merchandise	1,675,302	1,588,522	1,338,978	1,439,621	1,291,933
Total merchandise	9,730,133	18,676,734	14,504,648	18,303,648	17,779,779
Specie, and gold and silver bullion ..	2,192,714	2,615,173	3,284,263	3,307,936	1,966,739
Total exports	11,922,847	21,291,907	17,788,911	21,611,584	19,746,518

2. Destination of Exports.—The next table shows the destination of the merchandise exported to Eastern countries during the last five years.

EXPORTS FROM AUSTRALIA OF MERCHANDISE TO PRINCIPAL EASTERN COUNTRIES.—DESTINATION, 1920–21 TO 1924–25.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	328,087	371,836	244,810	1,589,414	454,061
East Indies	2,372,881	2,262,758	1,865,660	1,603,992	2,045,701
Hong Kong	668,713	536,596	501,874	776,998	631,973
India and Ceylon	1,229,252	5,158,346	711,432	739,712	943,820
Japan	2,853,406	7,952,547	9,308,960	11,555,484	11,646,516
Malaya (British)	1,856,924	1,829,588	1,303,264	1,514,430	1,528,308
Philippine Islands	420,870	565,063	568,648	523,618	529,405
Total	9,730,133	18,676,734	14,504,648	18,303,648	17,779,779

3. Chief Exports to Eastern Countries.—The series of tables given hereunder shows the value of each of the principal articles exported to the countries specified during each of the last five years.

BUTTER.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	91,173	88,358	43,123	61,571	64,879
East Indies	374,999	461,645	503,267	439,086	450,084
Hong Kong	62,127	42,116	44,411	34,968	45,271
India and Ceylon ..	35,922	19,237	26,150	24,060	25,588
Japan	12,204	36,721	30,358	19,676	6,511
Malaya (British)	78,856	76,751	98,877	67,523	75,814
Philippine Islands ..	45,002	35,753	34,139	31,500	30,218
Total	700,283	760,581	780,325	678,384	698,365

The exports of butter given above for the year 1924–25 were shipped from the several States as follows:—New South Wales, £120,852; Victoria, £510,503; Queensland, £67,003; South Australia, £3; Western Australia, £4.

COAL.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	10,251	..	..	..	..
East Indies	422,213	219,919	76,519	101,369	88,637
Hong Kong	13,758	4,293	2,259	..	..
India and Ceylon ..	105,488	65,643	118,912	18,860	21,997
Japan	7,639	2,502	889	..	..
Malaya (British)	192,328	70,803	48,065	76,913	43,881
Philippine Islands ..	111,488	59,163	150,988	160,088	104,046
Total	863,165	422,323	397,632	357,230	258,561

The exports of coal are chiefly from New South Wales.

GRAIN AND PULSE.—WHEAT.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	..	34,150	10,003	1,014,864	..
East Indies	173	7	..	28	..
India and Ceylon ..	10,306	4,248,575	296	268	529
Japan	3,376	1,961,063	976,271	2,980,952	2,228,549
Malaya (British)	..	83	7	13	1
Philippine Islands ..	26	..	19	..	..
Total	13,881	6,243,878	986,596	3,996,125	2,229,079

The exports of wheat given for the year 1924–25 were shipped from the following States :—New South Wales, £1,754,572 ; Victoria, £321,985 ; South Australia, £152,522.

GRAIN AND PULSE.—FLOUR.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	1,440	63,388	3,140	128,498	3,312
East Indies	345,561	591,093	628,414	559,149	645,365
Hong Kong ..	9,364	124,498	71,891	126,273	181,599
India and Ceylon ..	11,768	94,315	98,828	104,747	149,582
Japan	8,603	83,260	19,337	162,048	2,164
Malaya (British)	186,268	301,390	404,952	393,035	444,257
Philippine Islands ..	65,270	155,915	127,428	145,127	149,755
Total	628,274	1,413,859	1,353,990	1,618,877	1,576,034

The flour exported during 1924–25 as above, was shipped from the several States as follows :—New South Wales, £631,853 ; Victoria, £672,150 ; Queensland, £5 ; South Australia, £77,433 ; Western Australia, £194,593.

GRAIN AND PULSE, OTHER THAN WHEAT AND FLOUR.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	3,365	423	120	161	199
East Indies	65,209	5,211	3,130	3,443	4,325
Hong Kong	5,426	1,208	514	303	515
India and Ceylon ..	6,804	6,802	3,035	2,454	5,039
Japan	22,346	10	11	23,990	2,174
Malaya (British)	3,861	33,857	2,976	3,506	3,735
Philippine Islands ..	2,454	182	96	7	358
Total	109,465	47,693	9,882	33,864	16,345

The exports given above for 1924–25 were shipped from the following States :—New South Wales, £944 ; Victoria, £10,964 ; Queensland, £271 ; South Australia, £81 ; Western Australia, £3,087 ; Tasmania, £998.

HAY AND CHAFF, AND COMPRESSED FODDER.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	65	44	42	104	749
East Indies	2,413	2,998	1,738	1,916	1,654
Hong Kong	1,783	1,103	953	850	936
India and Ceylon ..	10,547	4,514	4,651	2,986	11,586
Japan	540	..	26	..	318
Malaya (British)	3,328	4,550	5,129	3,946	2,154
Philippine Islands ..	5,983	8,901	6,037	11,470	5,390
Total	24,659	22,110	18,576	21,272	22,787

The exports given above for the year 1924–25 were shipped from the several States as follows :—New South Wales, £698 ; Victoria, £19,740 ; Western Australia, £2,155 ; Tasmania, £6 ; Northern Territory, £188.

HORSES.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	140	..	110	140	480
East Indies	15,375	6,163	4,555	2,480	2,438
Hong Kong	..	..	..	100	..
India and Ceylon ..	128,611	26,724	71,274	9,726	71,255
Japan	3,025	2,425	1,260	3,596	11,357
Malaya (British)	6,406	5,070	5,285	4,380	6,130
Philippine Islands ..	678	..	350	1,291	1,417
Total	154,235	40,382	82,834	21,713	93,077

The value of horses exported to the above countries from each State during 1924–25 was as follows :—New South Wales, £24,265 ; Victoria, £15,884 ; Queensland, £43,766 ; South Australia, £8,980 ; Western Australia, £170 ; Northern Territory, £12.

LEAD, PIG.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	..	223	15,196	49,714	84,512
East Indies	128	313	..	..	..
Hong Kong	347	39,695	67,512	63,865	65,424
Japan	32,200	307,732	562,140	419,988	404,146
Malaya (British)	26	..	..	..	..
Philippine Islands ..	..	..	..	203	..
Total	32,701	347,963	644,848	533,770	554,082

The exports of pig lead in 1924–25 were shipped from New South Wales, £155,052; South Australia, £399,030.

MEATS.—PRESERVED BY COLD PROCESS.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	..	5	1,416	..	7,915
East Indies	7,600	14,566	17,028	8,539	5,629
Hong Kong	31,599	20,961	21,720	36,263	21,007
India and Ceylon ..	34,747	16,883	20,476	21,732	25,055
Japan	1,303	4,023	5,813	23,067	11,317
Malaya (British)	130,963	89,542	77,026	64,389	75,324
Philippine Islands ..	73,691	148,310	80,649	118,884	115,747
Total	279,903	294,290	224,128	272,874	261,994

The exports to the above-mentioned Eastern countries during 1924–25 of meats preserved by cold process were shipped from the following States :—New South Wales, £72,108 ; Victoria, £18,931 ; Queensland, £170,955.

MEATS.—OTHER THAN MEATS PRESERVED BY COLD PROCESS.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	16,115	5,193	5,621	3,757	3,063
East Indies ..	114,501	81,683	75,409	66,459	66,099
Hong Kong	23,082	13,303	9,410	11,126	8,385
India and Ceylon ..	50,987	80,220	26,229	10,048	12,879
Japan	2,460	1,619	2,251	17,611	661
Malaya (British)	51,982	45,529	28,789	24,047	19,497
Philippine Islands ..	48,877	23,822	25,168	20,252	26,737
Total	308,004	251,369	172,877	153,300	137,321

The exports given above for the year 1924–25 were shipped from the following States :—New South Wales, £43,014 ; Victoria, £26,634 ; Queensland, £67,521 ; South Australia, £104 ; Western Australia, £43 ; Northern Territory, £5.

SANDALWOOD.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	39,798	7,611	30,876	83,415	53,031
East Indies	96	66	3	..	..
Hong Kong	111,730	57,714	66,460	222,300	113,551
India and Ceylon ..	7,736	6,180	8,161	6,192	11,574
Japan	40	50	..	..	..
Malaya (British)	35,191	3,935	5,322	45,118	27,321
Total	194,591	75,556	110,822	357,025	205,477

The exports of sandalwood in 1924–25 were shipped from Queensland, £18,682 ; Western Australia, £186,775 ; Northern Territory, £20.

SKINS, HOOFS, HORNS, BONES, SINEWS, AND TALLOW.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	5,268	31,161	14,522	39,374	62,729
East Indies	821	4,230	4,040	3,315	5,420
Hong Kong	11,728	10,289	8,369	17,018	8,460
India and Ceylon	75,167	65,883	65,934	48,244	101,499
Japan	345,460	488,554	424,462	533,498	617,804
Malaya (British)	709	960	2,170	6,489	8,213
Philippine Islands	117	..	4,122	74	183
Total	439,270	601,077	523,619	648,012	804,308

The above exports of skins, etc., in 1924–25 were shipped from the several States as follows :—New South Wales, £427,966 ; Victoria, £129,256 ; Queensland, £210,946 ; South Australia, £33,806 ; Western Australia, £754 ; Northern Territory, £1,580.

TIMBER, UNDRESSED.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	39,682	19,796	27,418	36,951	197
East Indies	3,674	37	16	53	..
Hong Kong	4,954	6,580	3,883	..	..
India and Ceylon	91,966	153,117	47,860	156,638	56,072
Japan	8,380	2,478	2,169	2,100	..
Malaya (British)	..	24	5,045	..	..
Philippine Islands	2,403	..	770	..	..
Total	151,059	182,032	87,161	195,742	56,269

The above exports of undressed timber during 1924–25 from the several States were shipped as follows :—Queensland, £197 ; Western Australia, £56,072.

WOOL.

Country.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
China	..	46,626	14,093	753	4,444
India and Ceylon	45,198	50,243	11,487	123,550	108,522
Japan	2,107,473	4,438,672	6,095,616	6,212,881	7,479,586
Malaya (British)	..	..	..	..	6,030
Philippine Islands	9,036	..	3,491	5,830	10,925
Total	2,161,707	4,535,541	6,124,687	6,343,014	7,609,507

The value of wool exported to the East by each State during 1924–25 was as follows :—New South Wales, £4,816,976 ; Victoria, £1,373,771 ; Queensland, £1,414,122 ; South Australia, £370 ; Western Australia, £2,968 ; Tasmania, £1,300.

§ 7. Classified Summary of Australian Trade.

1. **Imports.**—The following table shows the value of imports into Australia during each of the last five years, arranged in classified order in accordance with the statistical classification which came into operation on 1st July, 1922:—

AUSTRALIAN IMPORTS.—IN CLASSES, 1920–21 TO 1924–25.

Classes.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	1,224,099	1,535,308	1,770,241	2,204,883	1,978,092
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	10,728,551	4,450,028	5,577,649	6,548,204	6,435,786
III. Alcoholic liquors, etc. ..	2,000,248	1,583,382	1,864,738	2,102,219	2,177,281
IV. Tobacco, etc.	3,841,548	2,467,033	2,232,910	3,213,264	2,410,190
V. Live animals	76,382	96,934	113,808	172,349	163,439
VI. Animal substances, etc. ..	716,523	703,196	960,784	1,398,676	1,202,670
VII. Vegetable substances, etc. ..	3,829,032	2,891,040	2,854,308	2,844,905	3,223,837
VIII. Apparel, textiles, etc. ..	52,322,707	34,225,643	44,570,027	38,482,446	42,372,272
IX. Oils, fats, and waxes ..	8,428,750	5,130,286	5,987,331	7,383,879	8,559,132
X. Paints and varnishes ..	627,333	426,039	564,038	635,814	657,075
XI. Stones and minerals, etc. ..	268,957	210,922	339,222	698,248	590,092
XII. Metals, metal manufactures, and machinery	42,220,826	25,096,571	35,203,294	43,751,850	45,594,102
XIII. Rubber and leather, etc. ..	3,093,611	1,583,611	2,643,498	3,497,381	3,384,270
XIV. Wood and wicker, etc. ..	5,722,464	2,884,550	4,767,841	6,218,902	5,046,136
XV. Earthenware, etc.	3,184,438	1,886,934	2,205,799	2,441,288	2,529,697
XVI. Paper and stationery ..	8,978,897	4,855,564	6,275,837	6,443,226	6,845,778
XVII. Jewellery, etc.	2,609,446	1,762,373	2,405,779	2,477,695	2,648,680
XVIII. Optical, surgical, and scientific instruments ..	1,125,158	943,688	1,189,254	1,472,669	1,657,928
XIX. Drugs, chemicals, etc. ..	5,591,325	3,556,742	3,895,988	3,878,526	4,120,460
XX. Miscellaneous	7,185,721	6,702,306	6,281,525	4,669,017	4,997,886
XXI. Gold and silver; and bronze specie	25,810	74,286	53,964	82,852	10,548,493
Total	163,801,826	103,066,436	131,757,835	140,618,293	157,143,296

2. **Exports.**—In the appended tables the exports from Australia are shown in classes according to the same classification, distinguishing (*a*) Australian Produce; (*b*) Other Produce (Re-exports); and (*c*) Total Exports.

EXPORTS FROM AUSTRALIA.—IN CLASSES, 1920–21 TO 1924–25.

Classes.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
(*a*) AUSTRALIAN PRODUCE.					
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	20,980,389	16,355,946	15,498,298	9,717,734	19,280,478
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	43,612,176	38,722,009	16,588,345	23,550,639	48,453,202
III. Alcoholic liquors, etc. ..	611,300	237,437	222,457	271,380	226,600
IV. Tobacco, etc.	369,157	451,940	620,430	380,127	381,504
V. Live animals	386,296	177,569	237,674	125,873	234,279
VI. Animal substances, etc. ..	37,741,985	51,552,436	64,284,144	63,047,851	72,024,630
VII. Vegetable substances, etc. ..	356,555	234,846	441,745	792,521	754,645
VIII. Apparel, textiles, etc. ..	1,168,653	318,775	171,619	260,437	173,830
IX. Oils, fats, and waxes ..	1,731,162	1,596,965	1,775,599	969,655	1,839,925
X. Paints and varnishes ..	179,834	83,983	59,462	39,325	49,877
XI. Stones and minerals, etc. ..	2,869,590	1,934,846	3,171,607	3,371,002	2,847,183
XII. Metals, metal manufactures, and machinery	5,467,373	3,912,258	4,895,991	5,905,199	6,607,261
XIII. Rubber and leather, etc. ..	1,603,105	891,039	911,652	945,034	774,682
XIV. Wood and wicker, etc. ..	1,471,550	1,242,562	1,116,025	1,334,668	1,662,163
XV. Earthenware, etc.	219,952	128,173	79,417	81,375	89,993
XVI. Paper and stationery ..	194,732	148,604	141,309	168,359	158,590
XVII. Jewellery, etc.	259,395	84,321	91,123	151,130	98,763
XVIII. Optical, surgical, and scientific instruments ..	67,564	61,076	58,336	72,990	63,727
XIX. Drugs, chemicals, etc. ..	914,950	501,326	505,228	501,598	545,309
XX. Micellaneous	760,025	514,832	536,272	582,783	610,472
XXI. Gold and silver; and bronze specie	5,464,938	4,336,569	3,344,576	3,892,865	2,065,304
Total	126,430,681	123,487,512	114,751,309	116,162,545	158,942,417

EXPORTS FROM AUSTRALIA.—IN CLASSES, 1920–21 TO 1924–25—*continued.*

(*b*) OTHER PRODUCE.—RE-EXPORTS.

Classes.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	71,200	39,822	77,391	61,228	17,906
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	474,283	427,943	435,999	544,313	518,744
III. Alcoholic liquors, etc. ..	155,548	102,889	77,246	78,268	82,036
IV. Tobacco, etc.	117,506	61,365	63,063	57,358	88,173
V. Live animals	3,793	9,092	12,977	10,517	24,486
VI. Animal substances, etc. ..	19,898	35,803	37,865	22,448	31,131
VII. Vegetable substances, etc. ..	1,078,137	1,077,326	615,748	546,820	534,749
VIII. Apparel, textiles, etc. ..	800,525	964,764	616,394	411,417	426,516
IX. Oils, fats, and waxes ..	272,633	243,834	94,646	126,056	183,463
X. Paints and varnishes ..	8,102	5,341	7,200	4,794	8,242
XI. Stones and minerals, etc. ..	7,175	2,015	4,583	2,957	2,786
XII. Metals, metal manufactures, and machinery	663,110	473,846	417,070	427,224	495,501
XIII. Rubber and leather, etc. ..	107,800	226,773	76,847	49,142	54,723
XIV. Wood and wicker, etc. ..	106,821	76,766	52,075	56,638	56,033
XV. Earthenware, etc.	30,354	14,129	20,140	16,917	15,152
XVI. Paper and stationery ..	114,537	99,575	100,718	155,064	83,319
XVII. Jewellery, etc.	173,277	132,914	103,866	51,679	77,376
XVIII. Optical, surgical, and scientific instruments ..	126,795	85,883	84,578	104,917	105,638
XIX. Drugs, chemicals, etc. ..	129,406	101,291	73,940	69,000	56,107
XX. Miscellaneous	1,252,056	176,102	145,892	527,585	222,361
XXI. Gold and silver; and bronze specie	15,275	1,550	600	277	3,300
Total	5,728,231	4,359,023	3,118,838	3,324,619	3,087,742

(*c*) TOTAL EXPORTS.—AUSTRALIAN PRODUCE AND RE-EXPORTS.

	£	£	£	£	£
I. Animal foodstuffs, etc. ..	21,051,589	16,395,768	15,575,689	9,778,962	19,298,384
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	44,086,459	39,149,952	17,024,344	24,094,952	48,971,946
III. Alcoholic liquors, etc. ..	766,848	340,326	299,703	349,648	308,636
IV. Tobacco, etc.	486,663	513,305	683,493	437,485	469,677
V. Live animals	390,089	186,661	250,651	136,390	258,765
VI. Animal substances, etc. ..	37,761,883	51,588,239	64,322,009	63,070,299	72,055,761
VII. Vegetable substances, etc. ..	1,434,692	1,312,172	1,057,493	1,339,341	1,289,394
VIII. Apparel, textiles, etc. ..	1,969,178	1,283,539	788,013	671,854	600,346
IX. Oils, fats, and waxes ..	2,003,795	1,840,799	1,870,245	1,095,711	2,023,388
X. Paints and varnishes ..	187,936	89,324	66,662	44,119	58,119
XI. Stones and minerals, etc. ..	2,876,765	1,936,861	3,176,190	3,373,959	2,849,969
XII. Metals, metal manufactures, and machinery	6,130,483	4,386,104	5,313,061	6,332,423	7,102,762
XIII. Rubber and leather, etc. ..	1,710,905	1,117,812	988,499	994,176	829,405
XIV. Wood and wicker, etc. ..	1,578,371	1,319,328	1,168,100	1,391,306	1,718,196
XV. Earthenware, etc.	250,306	142,302	99,557	98,292	105,145
XVI. Paper and stationery ..	309.269	248,179	242,027	323,423	241,909
XVII. Jewellery, etc.	432,672	217,235	194,989	202,809	176,139
XVIII. Optical, surgical, and scientific instruments ..	194,359	146,959	142,914	177,907	169,365
XIX. Drugs, chemicals, etc. ..	1,044,[illegible]56	602,617	579,168	570,598	601,416
XX. Miscellaneous	2,012,081	690,934	682,164	1,110,368	832,833
XXI. Gold and silver; and bronze specie	5,480,213	4,338,119	3,345,176	3,893,142	2,068,604
Total	132,158,912	127,846,535	117,870,147	119,487,164	162,030,159

3. Imports of Merchandise, Specie and Bullion.—The table hereunder gives the value of imports into Australia during each of the last five years, grouped under the headings—Merchandise, and Specie and Bullion. The imports of merchandise are shown under the sub-headings of " free " and " dutiable " goods.

IMPORTS OF MERCHANDISE, SPECIE AND BULLION.—AUSTRALIA, 1920–21 TO 1924–25.

Year.	Merchandise.		Specie and Bullion.	Total Imports.
	Free Goods.	Dutiable Goods.		
	£	£	£	£
1920–21	62,467,773	101,313,909	20,144	163,801,826
1921–22	38,400,193	64,622,939	43,304	103,066,436
1922–23	43,749,955	87,977,056	30,824	131,757,835
1923–24	43,092,594	97,463,907	61,792	140,618,293
1924–25	49,827,415	96,773,074	10,542,807	157,143,296

4. Exports of Merchandise, Specie and Bullion.—The next table shows the value of exports from Australia during each of the last five years, grouped under the headings—Merchandise, and Specie and Bullion; giving the exports of Australian Produce and Other Produce separately.

EXPORTS OF MERCHANDISE, SPECIE AND BULLION.—AUSTRALIA, 1920–21 TO 1924–25.

Year.	Merchandise.		Specie and Bullion.		Total Exports.
	Australian Produce.	Other Produce.	Australian Produce.	Other Produce.	
	£	£	£	£	£
1920–21	120,997,216	5,712,956	5,433,465	15,275	132,158,912(*a*)
1921–22	119,160,362	4,357,473	4,327,150	1,550	127,846,535(*a*)
1922–23	111,450,970	3,118,238	3,300,339	600	117,870,147(*a*)
1923–24	112,350,326	3,324,342	3,812,219	277	119,487,164(*a*)
1924–25	156,902,682	3,084,442	2,039,735	3,300	162,030,159(*a*)

(*a*) Does not include the value of Ships' Stores. See later table.

5. **Imports in Tariff Divisions.**—In the following table the imports into Australia during the last five years have been classified in accordance with the sixteen divisions of the Customs Tariff 1921–24.

IMPORTS CLASSIFIED ACCORDING TO DIVISIONS OF THE CUSTOMS TARIFF.—AUSTRALIA, 1920–21 TO 1924–25.

Tariff Division.	Imports.				
	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
I. Ale, Spirits, and Beverages	2,237,364	1,758,023	2,053,142	2,322,901	2,378,572
II. Tobacco and preparations thereof ..	3,841,548	2,467,033	2,232,910	3,213,264	2,410,190
III. Sugar	6,590,314	209,787	126,649	52,593	35,356
IV. Agricultural Products and Groceries ..	8,127,079	7,891,727	9,274,696	10,762,231	10,542,590
V. Textiles, Felts and Furs, and Manufactures thereof, and Attire	47,974,571	31,151,498	40,112,188	35,267,870	38,667,273
VI. Metals and Machinery	37,286,278	21,184,911	26,829,243	29,883,111	30,453,412
VII. Oils, Paints, and Varnishes	9,457,198	5,711,960	6,673,295	8,123,183	9,296,472
VIII. Earthenware, Cement, China, Glass, and Stone	3,622,336	2,223,380	2,837,598	3,103,866	3,260,919
IX. Drugs and Chemicals	4,856,129	3,115,647	2,691,018	2,587,796	2,716,011
X. Wood, Wicker, and Cane	5,948,837	2,989,968	4,767,841	6,218,902	5,046,136
XI. Jewellery and Fancy Goods	3,139,672	2,332,226	2,857,037	3,196,898	3,467,142
XII. Hides, Leather, and Rubber ..	3,411,386	1,738,198	3,007,484	3,926,855	3,857,376
XIII. Paper and Stationery	8,978,897	4,839,613	6,259,063	6,387,522	6,857,691
XIV. Vehicles	5,984,764	4,061,656	8,335,452	13,807,297	15,010,175
XV. Musical Instruments	874,313	426,610	741,815	1,332,776	1,373,312
XVI. Miscellaneous ..	8,673,891	8,692,515	10,847,830	7,557,313	8,344,792
— Free Goods not specially mentioned in Tariff	2,777,105	2,228,380	2,079,750	2,812,123	2,883,070
Total Merchandise	163,781,682	103,023,132	131,727,011	140,556,501	146,600,489
Specie and Bullion	20,144	43,304	30,824	61,792	10,542,807
Grand Total ..	163,801,826	103,066,436	131,757,835	140,618,293	157,143,296

§ 8. Excise.

While it does not come under the heading of oversea trade, the accompanying information in regard to Excise has been inserted here for purpose of convenience. The following table shows, in detail, the quantities of spirits, beer and tobacco on which Excise Duty was paid in Australia during each of the five years 1920–21 to 1924–25.

QUANTITIES OF SPIRITS, BEER, AND TOBACCO ON WHICH EXCISE DUTY WAS PAID.—AUSTRALIA, 1920–21 TO 1924–25.

Article.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.
Spirits—					
Brandy (Pure Australian Standard Brandy) ..	165,277	145,202	158,492	185,340	201,251
Brandy (Blended Wine Brandy, etc)	15,479	11,123	14,016	13,815	8,944
Gin (Distilled from Barley, Malt, Grain, or Grape Wine, etc.)	66,792	50,212	54,503	54,870	47,948
Whisky (Australian Standard Malt Whisky) ..	171,244	136,349	143,190	148,088	127,251
Whisky (Australian Blended Whisky)	367	92	99	95	40
Rum (Australian Standard Rum)	454,993	448,213	468,952	520,516	511,917
Rum (Blended)	..	..	642	1,208	1,259
Liqueurs	80	101	635	138	333
Spirits, n.e.i.	4,909	1,054	2,756	2,035	169
Spirits for Industrial or Scientific Purposes ..	114,792	130,991	141,646	142,499	133,347
Spirits for Fortifying Wine (Distilled from Doradillo Grapes)(b)	..	..	..	..	(b)457,784
Spirits for Fortifying Wine	703,932	793,749	851,007	941,076	730,944
Spirits for making Vinegar	41,107	35,325	38,378	45,089	52,799
Spirits for Manufacture of Scents, etc.(a)	19,720	21,373	26,046	27,066	28,173
Methylated Spirits(a) ..	41,416	5	..	..	..
Amylic Alcohol and Fusel Oil	20	13	27	54	52
Total, Spirits ..	1,800,128	1,773,802	1,900,389	2,081,889	2,302,211
	gal.	gal.	gal.	gal.	gal.
Beer	66,118,642	62,968,031	63,195,280	63,202,012	64,939,563
	lb.	lb.	lb.	lb.	lb.
Tobacco—Manufactured, n.e.i.	9,844,157	11,872,442	11,894,776	12,208,264	12,586,337
Tobacco—Hand-made ..	516,381	545,532	471,147	561,628	489,913
Tobacco—Fine-cut, suitable for Cigarettes	37,187	36,303	33,804	29,025	27,490
Total, Tobacco ..	10,397,725	12,454,277	12,399,727	12,798,917	13,103,740
Cigars—Machine-made ..	59,463	51,187	52,812	38,879	45,178
Cigars—Hand-made ..	456,634	473,840	434,258	409,597	429,158
Total, Cigars ..	516,097	525,027	487,070	448,476	474,336
Cigarettes—Machine-made ..	5,009,842	4,807,118	4,410,713	4,739,115	4,827,649
Cigarettes—Hand-made ..	48,943	57,497	42,448	30,321	27,762
Total, Cigarettes ..	5,058,785	4,864,615	4,453,161	4,769,436	4,855,411
Snuff	238	230	231	100	50

(a) Liquid gallons. (b) On and after 1st January, 1925.

§ 9. Ships' Stores.

Prior to 1906 goods shipped in Australian ports on board oversea vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and have been omitted from the export figures. The value of these stores shipped each year during the period 1906 to 1924–25, showing bunker coal separately, is given in the following table :—

VALUE OF STORES SHIPPED IN AUSTRALIAN PORTS ON OVERSEA VESSELS, 1906 TO 1924–25.

Period.	Bunker Coal.	All Stores (including Coal).	Period.	Bunker Coal.	All Stores (including Coal).
	£	£		£	£
1906	575,471	875,966	1915–16	719,510	1,544,872
1907	663,724	998,897	1916–17	748,852	1,676,116
1908	867,707	1,196,106	1917–18	632,910	1,389,291
1909	781,113	1,071,677	1918–19	857,507	1,765,367
1910	740,567	1,080,133	1919–20	1,487,872	2,688,371
1911	858,783	1,238,446	1920–21	2,027,133	3,560,648
1912	1,008,259	1,431,985	1921–22	2,178,101	3,152,604
1913	1,018,595	1,458,702	1922–23	1,988,890	2,887,399
1914 (1st six mths.)	533,288	771,581	1923–24	1,672,160	2,614,948
1914–15	829,875	1,587,757	1924–25	1,485,957	2,714,562

§ 10. Exports according to Industries.

1. **Classification.**—The following table gives an analysis of the exports of Australian produce according to the main classes of industry in which the goods were produced. In certain cases in which the produce has been subjected to some initial process of manufacture, opinions may differ in regard to its classification, but in preparing the tabulation the method adopted generally has been to credit to the primary industry those products in which the value of the primary element is appreciably the greater. Thus, such commodities as flour, jams and preserved fruits, chaff and prepared fodders, etc., have been treated as the produce of agriculture ; butter, cheese, preserved milk, and bacon and hams have been credited to the dairying industry ; canned meats, tallow and fellmongered skins have been credited to the pastoral industry, but leather has been classed as a product of manufacturing ; minerals and metals which have been smelted or otherwise refined, but not further manufactured, have been included as the produce of mining ; and sawn timber as the produce of forestry.

Increasing manufacturing activity in close proximity to the centres of primary production—in some instances by co-operative association of primary producers—has the effect of merging more closely the direct interests of primary and secondary production. Prominent cases of the kind referred to are the production of butter, preserved and dried milk, bacon and hams, canned and dehydrated fruit, jam, sugar, flax fibre, etc. As, therefore, no sharp distinction can be made in such cases between the primary and secondary industries, it follows that the values allocated to these divisions in the table must be taken as a general indication only of their relative importance in the export returns. While there is in the primary products some value due to factory processes, there is, on the other hand, in the manufactured products a considerable element of Australian primary produce in the raw materials from which these manufactured products were made. As the figures given are, however, on the same basis throughout the period covered by the table, they indicate, with reasonable accuracy, the variations in the relative importance of the several industrial groups.

EXPORTS OF AUSTRALIAN PRODUCE ACCORDING TO INDUSTRIAL ORIGIN.

VALUE OF EXPORTS AS RECORDED.

Industrial Group.	1913.(a)		1923-24.		1924-25.	
	£		£		£	
Agriculture	10,677,734	100	23,747,422	222	48,702,116	456
Pastoral	42,057,346	100	67,024,019	159	80,524,818	191
Dairy and Farmyard ..	3,854,734	100	6,318,361	164	12,303,238	319
Mines and Quarries ..	14,712,242	100	12,722,501	86	10,967,554	75
Fisheries	424,849	100	437,476	103	489,338	115
Forestry	1,106,549	100	1,648,709	149	1,845,875	167
Total Primary Produce ..	72,833,454	100	111,898,488	154	154,832,939	213
Manufacturing	2,304,693	100	4,264,057	185	4,109,478	178
Total	75,138,147	100	116,162,545	155	158,942,417	212

(a) Base year.

2. **Effect of Price Changes.**—If the effect of price changes be eliminated from the above figures by the application of the export price index-numbers, the relative quantitative results will be approximately as follows :—

EXPORTS OF AUSTRALIAN PRODUCE.—ELIMINATION OF PRICE CHANGES.

Industrial Group.	1913. (a)		1923-24.		1924-25.	
	£		£		£	
Agriculture	10,677,734	100	18,495,051	173	27,986,806	262
Pastoral	42,057,346	100	30,515,372	73	32,521,982	77
Dairy and Farmyard ..	3,854,734	100	3,978,621	103	8,360,846	217
Mines and Quarries ..	14,712,242	100	9,269,370	63	7,636,159	52
Fisheries	424,849	100	505,753	119	470,970	111
Forestry	1,106,549	100	973,839	88	1,051,781	95
Total Primary Produce ..	72,833,454	100	63,738,006	88	78,028,544	107
Manufacturing	2,304,693	100	2,160,110	94	2,090,274	91
Total	75,138,147	100	65,898,116	88	80,118,818	107

(a) Base year.

3. **Relative Importance of Industrial Groups.**—In the first of the two preceding tables the value of commodities in each industrial group of exports of Australian produce is that recorded at date of shipment from Australia, while in the second table the effect of price changes during the period has been taken into account. In the table showing exports according to recorded value the pastoral group was responsible for the highest proportion of exports during each year. In 1913 the value of commodities included in this group represented 55.97 per cent. of the total exports, as compared with 57.69 per cent. during the year 1923-24, and 50.66 per cent. during 1924-25. Wool constitutes the greater part of the exports in the pastoral group. The high price ruling for that commodity was responsible for the increased percentage during 1923-24, as the quantity exported was less than in 1913.

The value of minerals, etc., included in the mining group exceeded the value of items in the agricultural group during the year 1913, but, during the two later years the value of agricultural produce exported was in excess of mineral exports. According to value, the agricultural group now ranks next to the pastoral group. Wheat and flour are the two items of export mainly responsible for this position. The percentage of the agricultural group on the total exports during 1923–24 was 20.44, as compared with 30.64 for the following year, the increase being due to the heavy exports of wheat during 1924–25.

The value of exports of dairy and farmyard produce increased during 1922–23, but declined considerably during 1923–24. The upward trend in 1924–25 was due to large exports of butter. Exports included in the fisheries and forestry groups have not varied to a marked extent, but a decrease occurred in 1924–25 in the manufacturing group as compared with the previous year.

The recorded value of exports for all industrial groups shows an increase of 55 per cent. during 1923–24, and of 112 per cent. during 1924–25, as compared with the total value of exports during the year 1913. The effect of eliminating price changes during the period is shown in the second table. Higher prices of commodities in 1923–24 and 1924–25 tended to inflate the value of exports during these years. On the basis of prices ruling in 1913 the exports of 1923–24 were 12 per cent. less than those of 1913, while the exports during 1924–25 were 7 per cent. greater than in 1913. The effect of eliminating price changes is particularly noticeable in the figures for the agricultural, pastoral, dairy produce, and manufacturing groups.

4. **Australian Production and Exports according to Industry.**—The following table shows the total value of Australian Production, and Australian Exports during the period of nine years, 1916–17 to 1924–25, classified according to industries; the proportion of each industrial group to total production and also to total exports; and in the last column the percentage exported of the production of each industrial group :—

VALUE OF AUSTRALIAN PRODUCTION AND EXPORTS, ACCORDING TO INDUSTRY, 1916–17 TO 1924–25.

Industrial Group.	Value of Production during Nine Years.	Percentage on Total Production.	Value of Exports during Nine Years.	Percentage on Total Exports.	Percentage Exported of the Production in each Industrial Group.
	£1,000		£1,000.		
Agriculture	719,270	23.30	259,833	24.42	36.12
Pastoral	823,906	26.70	539,058	50.67	65.43
Dairy and Farmyard ..	359,699	11.65	76,354	7.18	21.23
Mining	201,418	6.53	123,187	11.58	61.16
Forestry and Fisheries ..	85,771	2.78	13,559	1.27	15.81
Total Primary Produce ..	2,190,064	70.96	1,011,991	95.12	46.21
Manufacturing	896,408	29.04	51,868	4.88	5.79
Total	3,086,472	100	1,063,859	100	34.47

The figures relating to value of production and value of exports are subject to the qualifications mentioned in 1 *ante*. A period of nine years is embraced, and the values of production and of exports therein give a very fair index of the relative importance of the several industrial groups. Of the total production 71.0 per cent. was classified as primary produce and 29.0 per cent. as manufactured articles. The main contributing groups in the primary produce section were pastoral with 26.7 per cent., and agriculture with 23.3 per cent. of the total production.

Exports of primary produce represented 95.1 per cent of the total exports. The pastoral group, with 50.7 per cent. of the total, shows the highest percentage, followed by the agricultural and mining groups with 24.4 per cent. and 11.6 per cent. respectively, Exports of goods classified in the manufacturing group represented only 4.9 per cent. of the total.

The figures in the last column of the table are of special interest, as they show the percentage exported of the production of each industrial group. Of the total primary production during the period 46.2 per cent. was exported. Over one-third of the agricultural production and approximately two-thirds of the pastoral production were sent abroad.

Sixty-one per cent. of the total production of the mining industry and 21 per cent. of the produce included in the dairy and farmyard group were exported.

The percentage of manufactured goods exported was comparatively small, only 6 per cent. of the production during the period being sent abroad.

§ 11. Movement of Specie and Bullion.

1. **Imports and Exports.**—The following tables show the value of gold and silver, specie and bullion, and of bronze specie imported and exported during the years 1920–21 to 1924–25 :—

AUSTRALIAN IMPORTS AND EXPORTS, SPECIE AND BULLION, 1920–21 TO 1924–25.

Items.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
IMPORTS.					
	£	£	£	£	£
Gold—Specie ..	13	7	7	..	2,585,875
Bullion ..	6,736	6,356	3,501	5,157	7,920,458
Total	6,749	6,363	3,508	5,157	10,506,333
Silver—Specie ..	10,882	34,877	24,300	55,172	33,546
Bullion ..	2,502	2,041	2,130	1,425	2,866
Total	13,384	36,918	26,430	56,597	36,412
Bronze—Specie ..	11	23	886	38	62
GRAND TOTAL ..	20,144	43,304	30,824	61,792	10,542,807
EXPORTS.					
	£	£	£	£	£
Gold—Specie ..	5,303,423	3,480,420	2,219,998	2,411,512	784,944
Bullion ..	796	200	5,907	385,755	157,233
Total	5,304,219	3,480,620	2,225,905	2,797,267	942,177
Silver—Specie ..	66,687	6,955	5,870	17,355	16,033
Bullion ..	77,319	841,085	1,069,159	997,874	1,084,825
Total	144,006	848,040	1,075,029	1,015,229	1,100,858
Bronze—Specie ..	515	40	5	..	..
Total—					
Australian Produce	5,433,465	4,327,150	3,300,339	3,812,219	2,039,735
Other Produce ..	15,275	1,550	600	277	3,300
GRAND TOTAL ..	5,448,740(a)	4,328,700(a)	3,300,939(a)	3,812,496(a)	2,043,035(a)

(a) Includes premium on gold exported.

2. **Imports and Exports by Countries.**—The next table shows the imports and exports of specie and bullion from and to various countries during the year 1924–25.

AUSTRALIAN IMPORTS AND EXPORTS—SPECIE AND BULLION BY COUNTRIES, 1924–25.

Country.	Imports.			Exports.		
	Specie.	Bullion.	Total.	Specie.	Bullion.	Total.
	£	£	£	£	£	£
Australia (*a*) ..	25,291	..	25,291	..	..	..
United Kingdom ..	2,876	3,877	6,753	57,896	3,866	61,762
Hong Kong ..	..	..	..	3,201	..	3,201
India and Ceylon ..	..	..	..	723,946	1,166,707	1,890,653
New Zealand ..	4,523	126,660	131,183	..	1,020	1,020
Pacific Islands—						
Fiji	..	..	..	51	781	832
Nauru	..	..	..	700	..	700
Solomon Islands ..	..	..	..	5,020	..	5,020
Territory of New Guinea ..	660	24,322	24,982	200	..	200
Papua	..	..	..	200	..	200
South African Union	2,333,312	2,392,030	4,725,342	..	..	..
Total British Countries ..	2,366,662	2,546,889	4,913,551	791,214	1,172,374	1,963,588
Austria	704	..	704	..	..	..
China	..	..	..	1,067	69,684	70,751
Netherlands East Indies ..	..	..	..	2,134	..	2,134
Pacific Islands: New Hebrides ..	..	..	..	6,562	..	6,562
United States of America ..	252,117	5,376,435	5,628,552	..	..	..
Total Foreign Countries	252,821	5,376,435	5,629,256	9,763	69,684	79,447
GRAND TOTAL ..	2,619,483	7,923,324	10,542,807	800,977	1,242,058	(*b*) 2,043,035

(*a*) Australian produce re-imported. (*b*) Includes the premium on gold exported.

§ 12. Effect of Prices on Value of Exports.

1. **General.**—In comparing the value of exports from, and of imports into, any country for a series of years, the question naturally arises as to the extent to which any variation in the aggregate value is due to fluctuations in prices, or to increase or decrease of actual quantities, for, in aggregates expressed in value—the only possible method when the commodities differ—the two sources of variation are confused.

2. **Methods of Computation.**—The method of computation adopted consists in the taking of an annual average for an extended period of the quantities of all such articles of export as are recorded by quantity, and the application to the average quantities so obtained of the average prices in each year. The quantities used to produce the following results are the averages for 19½ years, viz., from 1st January, 1897, to 30th June, 1916, these being taken as representing the general quantitative composition or norm of the exports from Australia. The results published in issues of the Official Year Book prior to No. 12 were ascertained by applying to the quantities exported during each year the average price per unit ruling in some year arbitrarily taken as the basic year. The advantage of the method now adopted is that the results are comparable throughout, whereas under the method previously followed each year was comparable with the basic year only.

3. **Effect on Export Values.**—The following table shows the value of total exports (Australian and other produce) as actually recorded in each year specified, together with the value computed on the assumption that the prices of 1901 were maintained. The table also shows the yearly "price levels" based upon the results so ascertained, and

furnishes a measure of the influence of prices on the value of exports in each year since 1901. Column IV.—values computed on 1901 prices—represents the volume of exports (less specie and gold bullion), expressed in the common denomination of value, and the figures therein show that, had the prices of 1901 remained constant, the value of the exports of merchandise during the year 1924–25, for example, would have been £57,464,127 only, instead of £161,071,949—the value actually recorded. The difference between these amounts (£103,607,822) results from a rise of 180 per cent. (*i.e.*, from 1,000 to 2,803) in the prices of commodities for the period intervening between 1901 and 1924–25. A further increment in values has arisen from the premium on exported gold. During 1924–25 this premium represented £49,289, or 6.7 per cent. on the standard price. Thus, on the basis of 1901 prices, the total value of the exports during 1924–25 would have been £58,373,048 instead of £162,030,159 as recorded.

The column " Price levels " shows that prices as indicated by the exports rose from the beginning of the decade to the year 1906. Owing to the large proportion of the aggregate value of exports represented by wool and wheat, any change in the price of these commodities has a marked effect on the index-numbers for the total group of exports, and it is to their influence that the fall of prices in 1911 is mainly due. From that year to 1920–21 prices steadily increased, but there was a considerable decline during 1921–22. An upward trend was manifested during 1922–23, and the price level for that year for all groups of exports was 2,039 as compared with 1,721 for 1921–22. The high prices realized for wool during 1923–24 and 1924–25 were responsible for the exceptional increase in the price-levels of the pastoral group for those years, the index-number for the last year reaching a level greatly in excess of any previous year. The price level for all groups of commodities rose sharply to 2,476 during 1923–24 and to 2,803 in 1924–25, the main contributing factor being the abnormal increase in the index-number for the pastoral group. The higher prices of wheat and flour during 1924–25 also tended to enhance the price level for that year. The index-number for the dairy produce group shows that commodities included therein were lower in price, while the index-numbers for the agricultural, pastoral, mining and miscellaneous groups indicate that prices of such commodities during 1924–25 were higher than in 1923–24.

AUSTRALIAN EXPORTS.—VALUES AND PRICE LEVELS, 1901, 1906, AND 1911 TO 1924–25.

Year.	Exports of Specie and Gold Bullion.	Other Exports.		Total Exports (including Specie and Gold Bullion).		Price-Levels. (a) Year 1901 = 1,000.
		Values as Recorded.	Values Computed on Mass Prices of 1901.	Values as Recorded.	Values Computed on Mass Prices of 1901.	
I.	II.	III.	IV.	V.	VI.	VII.
	£	£	£	£	£	
1901 ..	14,347,776	35,348.396	35,348,396	49,696,172	49,696,172	1000
1906 ..	16,895,059	52,842,704	42,005,330	69,737,763	58,900,389	1258
1911 ..	11,561,639	67,920,619	58,501,825	79,482,258	70,063,464	1161
1912 ..	11,881,216	67,214,874	53,218,427	79,096,090	65,099,643	1263
1913 ..	3,164,105	75,407,664	58,455,553	78,571,769	61,619,658	1290
1914–15 ..	2,474,197	58,118,379	44,740,861	60,592,576	47,215,058	1299
1915–16 ..	10.391,019	64,387,302	40,469,705	74,778,321	50,860.724	1591
1916–17 ..	11,521,815	86,433,667	43,985,398	97,955,482	55,507,213	1965
1917–18 ..	6,483,265	74,945,956	35,962,551	81,429,221	42,445,816	2084
1918–19 ..	7,252,202	106,711,774	52,489,805	113,963,976	59,742,007	2033
1919–20 ..	5,654,909[b]	144,168,600	64,103,424	149,823,509	68,516,379	2249
1920–21 ..	5,371,421[b]	126,787,491	56,249,996	132,158,912	60,330,722	2254
1921–22 ..	3,487,615[b]	124,358,920	72,259,686	127,846,535	75,225,164	1721
1922–23 ..	2,231,780[b]	115,638,367	56,713,275	117,870,147	58,818,605	2039
1923–24 ..	2,814,622[b]	116,672,542	47,121,382	119,487,164	49,742,586	2476
1924–25 ..	958,210[b]	161,071,949	57,464,127	162,030,159	58,373,048	2803

(*a*) These are index-numbers for the total group of exports, excluding specie and gold bullion.

(*b*) Including premium on gold exported 1919–20, £1,241,954, or 28.8 per cent. on standard price; 1920–21, £1,290,695, or 32.1 per cent.; 1921–22, £522,137, or 17.6 per cent.; 1922–23, £126,450, or 6.04 per cent.; 1923–24, £193,418, or 8.72 per cent.; 1924–25, £49,289, or 6.7 per cent.

4. Price-Levels of Exports.—The following table of index-numbers shows the variations in price of the different classes of goods exported, grouped according to industrial origin :—

AUSTRALIAN EXPORTS.—PRICE-LEVELS, 1901, 1906, AND 1911 TO 1924–25.

Year.	Agricultural Produce.	Pastoral Produce.	Dairy Produce.	Mineral Produce.(a)	Miscellaneous.	All Classes.(a)
1901	1,000	1,000	1,000	1,000	1,000	1,000
1906	1,155	1,344	1,021	1,113	991	1,258
1911	1,243	1,193	1,085	944	1,227	1,161
1912	1,388	1,268	1,198	1,133	1,254	1,263
1913	1,324	1,334	1,124	1,114	1,329	1,290
1914–15 ..	1,480	1,323	1,176	1,066	1,221	1,299
1915–16 ..	1,927	1,589	1,488	1,393	1,106	1,591
1916–17 ..	1,726	2,131	1,690	1,650	1,357	1,965
1917–18 ..	1,954	2,250	1,624	1,760	1,401	2,084
1918–19 ..	1,864	2,166	1,855	1,692	1,775	2,033
1919–20 ..	2,145	2,393	2,023	1,787	2,150	2,249
1920–21 ..	3,177	2,093	2,854	1,813	2,179	2,254
1921–22 ..	2,108	1,717	1,507	1,427	1,845	1,721
1922–23 ..	1,931	2,213	1,845	1,459	1,701	2,039
1923–24 ..	1,700	2,930	1,785	1,529	1,803	2,476
1924–25 ..	2,304	3,303	1,654	1,600	1,942	2,803

(a) Excluding gold which, since February, 1919, has been exported at a premium.

§ 13. External Trade of Australia and other Countries.

1. Essentials of Comparisons.—Direct comparisons of the external trade of any two countries are possible only when the general conditions prevailing therein, and the system of record, are more or less identical. For example, in regard to the mere matter of record, it may be observed that in one country the value of imports may be the value at the port of shipment, while in another the cost of freight, insurance, and charges may be added thereto. Again, the values of imports and exports in the one may be declared by merchants, whereas in the other they may be the official prices fixed from time to time by a commission constituted for the purpose. In later years, moreover, a very substantial difference in the value of imports would arise from the different methods of converting the moneys of foreign countries, *i.e.*, from the application of current rates of exchange or of the mint par. Lastly, the figures relating to the external trade of any country are also affected in varying degree by the extent to which they include transit or re-export trade. Including bullion and specie, the transit trade of Belgium, for example, represented, prior to the war, approximately 40 per cent. of the gross trade recorded ; of Switzerland, 45 per cent. ; of France, 20 per cent. ; and of the United Kingdom, 15 per cent. ; whereas in Australia the same element represents, normally, about 4 per cent., and in New Zealand even less.

2. "Special Trade" of Various Countries.—Special trade may be defined according to the interpretation of the British Board of Trade, as (*a*) imports entered for consumption in the country (as distinguished from imports for transhipment or re-export) and (*b*) exports of domestic products.

In the following table the figures relate as nearly as possible to imports entered for consumption in the various countries specified, and to exports of their domestic products. It is to be noted, however, that these figures do not invariably denote the same thing throughout, since, in the United Kingdom and other manufacturing countries, raw or partly manufactured materials are imported as for home consumption, and, after undergoing some process of manufacture or further modification, are re-exported as domestic production. Further, the statistical records of many countries do not distinguish between bullion and specie imported for the use of the particular country (home consumption) and the amount in transit, nor between the exports of that produced within the country and that re-exported. Nevertheless, a comparison of this character reveals approximately the extent of the external trade which otherwise would not be manifest. The figures relating to foreign countries have been converted on the average of the commercial rates of exchange for the years subsequent to the war.

IMPORTS FOR HOME CONSUMPTION, AND EXPORTS OF DOMESTIC PRODUCTS —INCLUDING BULLION AND SPECIE, VARIOUS COUNTRIES.

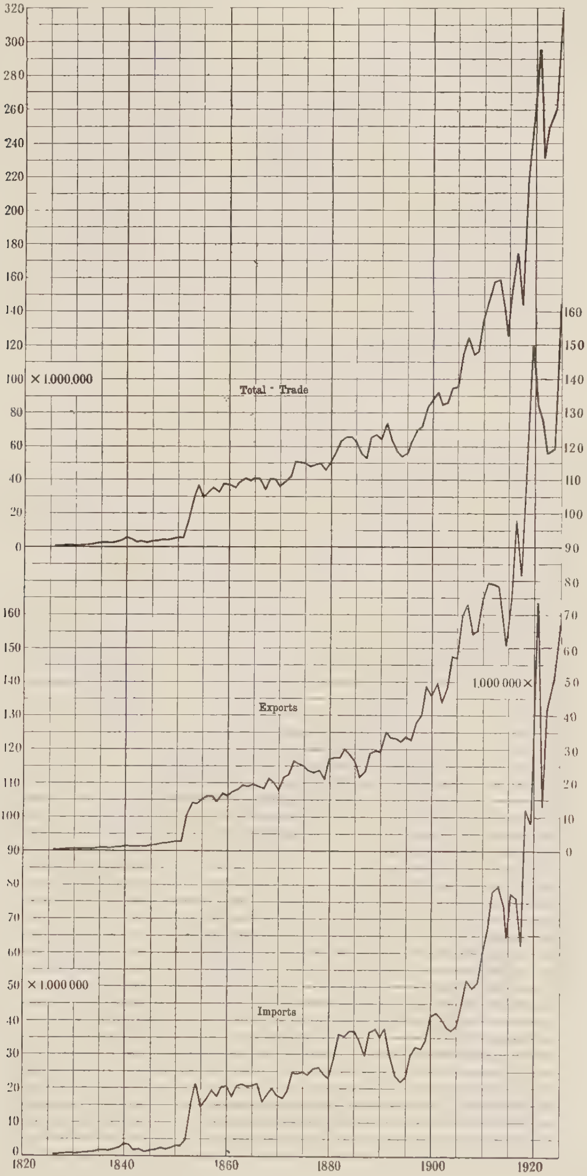
Country.	Year ended—	Trade.			Trade per Inhabitant.		
		Imports.	Exports.	Total.	Imports.	Exports.	Total.
		£1,000	£1,000	£1,000	£ s. d.	£ s. d.	£ s. d.
C'wealth of Australia	30/6/25	154,056	158,942	312,998	26 4 7	27 1 3	53 5 10
	31/12/13	76,323	75,113	151,436	15 17 11	15 12 10	31 10 9
United Kingdom (*a*)	31/12/25	1,168,447	773,086	1,941,533	26 0 4	17 4 4	43 4 8
	31/12/13	671,265	525,461	1,196,726	14 11 8	11 8 4	26 0 0
Canada (*a*) ..	31/3/25	163,978	219,973	383,951	17 15 5	23 16 10	41 12 3
	31/3/14	132,019	89,915	221,934	16 13 6	11 7 2	28 0 8
New Zealand	31/12/25	51,715	54,521	106,236	37 8 5	39 9 1	76 17 6
	31/12/13	21,879	22,578	44,457	20 10 7	21 3 8	41 14 3
Union of South Africa	31/12/24	63,725	75,847	139,572	9 3 11	10 18 11	20 2 10
	31/12/22	51,557	60,334	111,891	7 8 11	8 14 4	16 3 3
United States of America (*a*)	30/6/25	800,642	1,016,666	1,817,308	7 2 10	9 1 5	16 4 3
	30/6/14	391,780	493,182	884,962	4 0 0	5 0 8	9 0 8
Argentine Republic	31/12/22	125,390	122,911	248,301	14 6 8	14 1 0	28 7 8
Belgium ..	31/12/23*b*	154,063	113,465	267,528	20 8 8	15 1 0	35 9 8
	31/12/12	210,211	160,054	370,265	27 15 3	21 2 10	48 18 1
Denmark (*a*)	31/12/23	78,526	63,343	141,869	23 17 6	19 5 2	43 2 8
	31/12/12	41,954	33,940	75,894	14 19 8	12 2 5	27 2 1
France ..	31/12/25	421,089	434,624	855,713	10 12 4	10 19 2	21 11 6
	31/12/12	350,482	281,495	631,977	8 16 9	7 1 11	15 18 8
German Empire (*a*)	31/12/24	444,581	320,690	765,271	7 8 7	5 7 2	12 15 9
	31/12/12	523,338	438,414	961,752	7 18 1	6 12 6	14 10 7
Italy ..	31/12/25	200,412	139,523	339,935	5 1 1	3 10 4	8 11 5
	31/12/12	149,113	97,536	246,649	4 5 2	2 15 8	7 0 10
Japan (*a*)	31/12/24	245,340	180,703	426,043	4 1 5	3 0 0	7 1 5
	31/12/12	66,007	57,972	123,979	1 5 3	1 2 2	2 7 5
Netherlands	31/12/23	173,061	112,435	285,496	23 19 10	15 11 9	39 11 7
	31/12/20	314,717	163,412	478,129	46 8 6	24 2 2	70 10 8
Norway ..	31/12/24	47,662	32,538	80,200	17 19 9	12 5 7	30 5 4
	31/12/12	28,756	18,147	46,903	11 15 9	7 8 10	19 4 7
Spain (*a*) ..	31/12/23	97,283	50,611	147,894	4 9 5	2 6 6	6 15 11
	31/12/12	42,089	41,826	83,915	2 2 9	2 2 6	4 5 3
Sweden (*a*) ..	31/12/24	87,338	77,312	164,650	14 10 10	12 17 6	27 8 4
	31/12/12	44,095	42,257	86,352	7 17 4	7 10 10	15 8 2
Switzerland (*a*)	31/12/23	89,783	71,213	160,996	23 2 9	18 7 1	41 9 10
	31/12/12	81,577	55,629	137,206	21 6 7	14 10 11	35 17 6

(*a*) Excluding Bullion and Specie. (*b*) Includes Luxemburg.

§ 14. Trade of the United Kingdom with Australia compared with that of Competing Countries.

1. Proportion of Trade from United Kingdom and Competing Countries.—The failure of the United Kingdom to maintain the position formerly held in the import trade of Australia has been a matter of more than ordinary interest for some years. Since 1908 a permanent resident Commissioner appointed by the British Board of Trade has been established in Australia for the purpose of advising manufacturers and merchants in the United Kingdom with regard to Australian trade affairs. From the 8th August, 1907, the Commonwealth Customs Tariffs have provided special rates in favour of goods from the United Kingdom with the object of assisting the British manufacturer to retain or improve his position in this market.

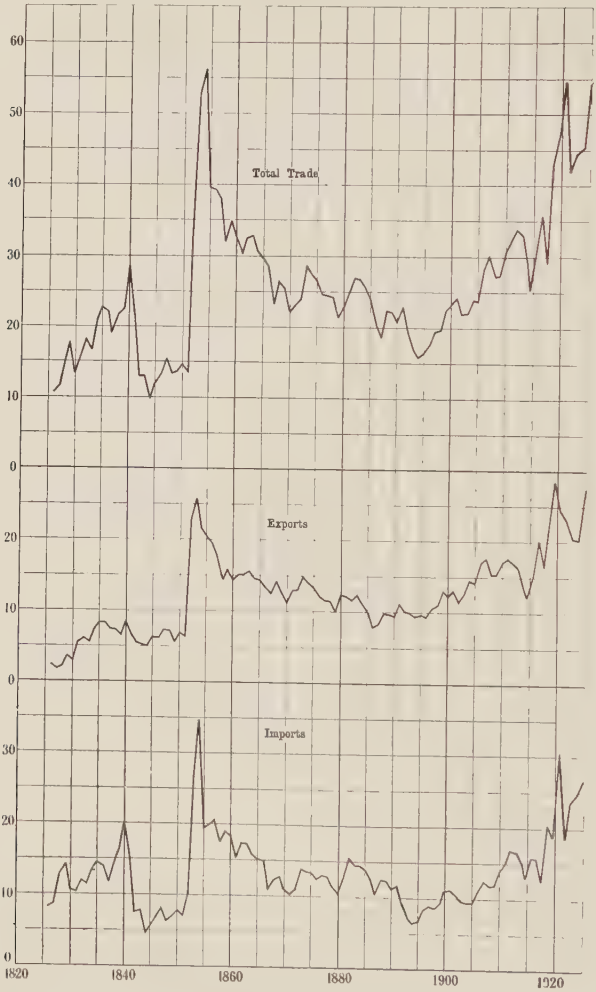
In an investigation into the relative position, as compared with other countries, occupied by the United Kingdom in the import trade of Australia, the comparison must, of course, be restricted to those classes of goods which are produced or manufactured in the United Kingdom. The imports to Australia include many commodities, such as tea, rice, unmanufactured tobacco, petroleum products, crude rubber, copra, timber, VALUES OF TOTAL TRADE, EXPORTS, AND IMPORTS, AUSTRALIA, 1826 TO 1924 25.



(See page 200.)

EXPLANATION.—The base of each square represents an interval of five years, and the vertical height five million pounds sterling for imports and exports, and ten million pounds sterling for total trade.

VALUES PER HEAD OF POPULATION OF TOTAL TRADE, EXPORTS, AND IMPORTS —AUSTRALIA, 1826 TO 1924-25.



(See page 200.)

EXPLANATION.—The base of each square represents an interval of five years, and the vertical height £5 per head of the population.

etc., which the United Kingdom could not supply. These items, in addition to others not available from that country, have, therefore, been omitted from the computation hereunder.

The imports into Australia have been classified under nine headings, and the trade of the United Kingdom therein is compared with that of France, Germany, Japan, and the United States. These countries have been selected as the principal competitors with the United Kingdom for the trade of Australia under the specified headings.

AUSTRALIAN IMPORTS.—PRODUCTS OF VARIOUS COUNTRIES, 1913 AND 1921–22 TO 1924–25.

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	U.S. of America.	All Countries.
		£	£	£	£	£	£
Foodstuffs of animal origin	1913 ..	301,025	3,093	12,071	6,988	289,229	947,697
	1921–22	345,803	3,145	..	6,423	390,545	1,535,308
	1922–23	335,022	4,074	200	9,052	346,090	1,770,241
	1923–24	453,861	3,364	274	9,872	306,164	2,204,883
	1924–25	467,833	3,564	870	16,615	387,610	1,978,092
Spirituous and alcoholic liquors	1913 ..	1,227,561	343,394	143,426	1,689	2,805	1,947,248
	1921–22	1,364,857	134,430	31	126	..	1,583,382
	1922–23	1,585,244	177,597	490	160	66	1,864,738
	1923–24	1,752,607	222,626	1,712	10	2,778	2,102,219
	1924–25	1,791,001	206,955	9,667	13	391	2,177,281
Apparel, textiles, and manufactured fibres	1913 ..	12,254,561	961,025	1,712,395	475,973	623,542	19,935,750
	1921–22	23,155,981	1,447,505	275	2,755,020	1,657,927	34,225,643
	1922–23	31,015,472	1,702,088	54,482	2,928,768	2,432,296	44,570,027
	1923–24	24,979,055	2,310,817	271,909	2,657,125	2,011,387	38,482,446
	1924–25	26,782,623	2,345,401	561,080	3,225,081	1,605,269	42,372,272
Metals, metal manufactures and machinery	1913 ..	13,905,483	217,148	2,380,152	7,657	3,817,705	21,670,212
	1921–22	14,443,901	337,048	70,099	69,993	7,194,024	25,096,571
	1922–23	20,159,269	306,487	229,225	73,346	10,095,490	35,203,294
	1923–24	22,347,802	484,638	319,497	57,107	15,991,224	43,751,850
	1924–25	24,627,221	543,988	431,986	30,394	16,140,794	45,594,102
Paper and stationery	1913 ..	1,789,577	21,930	266,483	10,656	403,679	3,134,750
	1921–22	2,260,155	122,122	2,337	17,744	523,048	4,855,564
	1922–23	3,577,157	143,373	19,918	25,052	630,867	6,275,837
	1923–24	4,064,670	171,957	47,440	19,772	677,986	6,443,226
	1924–25	4,692,738	119,671	93,273	15,098	630,344	6,845,778
Jewellery, timepieces, and fancy goods	1913 ..	521,290	88,070	263,688	19,307	138,217	1,442,292
	1921–22	769,645	104,583	24	86,254	231,162	1,762,373
	1922–23	1,003,207	165,016	53,236	149,477	261,561	2,405,779
	1923–24	959,693	155,293	134,257	102,149	314,763	2,477,695
	1924–25	1,002,094	151,159	281,642	91,037	247,056	2,648,680
Earthenware, cements, glass, etc.	1913 ..	650,138	40,245	453,188	21,493	62,887	1,565,727
	1921–22	1,199,808	20,252	25	202,257	166,885	1,886,934
	1922–23	1,311,817	20,090	10,882	221,253	155,720	2,205,799
	1923–24	1,462,533	17,438	32,092	181,736	219,969	2,441,288
	1924–25	1,529,768	32,334	73,824	147,195	193,359	2,529,697
Drugs, chemicals, fertilizers	1913 ..	1,020,647	245,426	304,179	139,178	210,758	2,721,902
	1921–22	1,718,317	228,599	5,451	50,740	619,954	3,556,742
	1922–23	1,982,104	266,499	57,980	31,572	586,548	3,895,988
	1923–24	1,875,757	220,889	88,735	43,495	574,636	3,878,526
	1924–25	1,873,447	231,085	117,507	40,211	614,023	4,120,460
Rubber and leather and manufactures thereof and substitutes therefor	1913 ..	485,216	68,686	347,045	688	433,837	1,717,035
	1921–22	503,498	135,473	2	1,048	508,765	1,583,611
	1922–23	687,663	152,341	15,475	759	1,151,893	2,643,498
	1923–24	692,595	147,826	13,731	2,272	1,592,065	3,497,381
	1924–25	800,003	185,339	26,260	1,467	1,449,439	3,384,270
Total above-mentioned imports	1913 ..	32,155,498	1,989,017	5,882,627	683,629	5,982,659	55,082,613
	1921–22	45,761,965	2,533,157	78,244	3,189,605	11,292,310	76,086,128
	1922–23	61,656,955	2,937,565	441,888	3,439,439	15,660,531	100,836,201
	1923–24	58,588,573	3,734,848	909,647	3,073,538	21,690,972	105,279,514
	1924–25	63,566,728	3,819,496	1,596,109	3,567,111	21,268,285	111,650,632
Total imports (less bullion and specie)	1913 ..	40,948,803	2,222,631	7,029,325	950,300	10,907,512	78,196,109
	1921–22	52,987,879	2,731,728	79,447	3,581,614	18,822,364	103,023,132
	1922–23	68,390,489	3,231,197	593,636	3,936,150	24,850,931	131,727,011
	1923–24	63,599,700	4,101,137	1,368,894	3,557,834	34,556,516	140,556,501
	1924–25	69,041,054	4,216,457	2,259,691	4,146,234	33,100,262	146,600,489

AUSTRALIAN IMPORTS.—PRODUCTS OF VARIOUS COUNTRIES.—PERCENTAGES, 1913 AND 1921–22 TO 1924–25.

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	U.S. of America.	All Countries.
Foodstuffs of animal origin	1913 ..	31.77	0.33	12.74	0.74	30.52	100
	1921–22	22.52	0.20	..	0.42	25.43	100
	1922–23	18.93	0.23	0.01	0.51	19.55	100
	1923–24	20.58	0.15	0.01	0.45	13.89	100
	1924–25	23.65	0.18	0.04	0.84	19.60	100
Spirituous and alcoholic liquors	1913 ..	63.04	17.64	7.37	0.09	0.14	100
	1921–22	86.18	8.49	..	0.01	..	100
	1922–23	85.02	9.52	0.03	0.01	0.00	100
	1923–24	83.37	10.59	0.08	0.00	0.13	100
	1924–25	82.26	9.51	0.44	0.00	0.02	100
Apparel, textiles, and manufactured fibres	1913 ..	61.48	4.82	8.59	2.39	3.13	100
	1921–22	67.66	4.23	0.00	8.05	4.85	100
	1922–23	69.59	3.82	0.12	6.57	5.46	100
	1923–24	64.91	6.00	0.71	6.90	5.23	100
	1924–25	63.20	5.54	1.32	7.61	3.79	100
Metals, metal manufactures, and machinery	1913 ..	64.17	1.00	10.98	0.04	17.62	100
	1921–22	57.55	1.34	0.28	0.28	28.67	100
	1922–23	57.26	0.87	0.65	0.21	28.68	100
	1923–24	51.08	1.11	0.73	0.13	36.55	100
	1924–25	54.01	1.19	0.95	0.07	35.40	100
Paper and stationery	1913 ..	57.41	0.70	8.50	0.34	12.88	100
	1921–22	46.55	2.52	0.05	0.37	10.77	100
	1922–23	57.00	2.28	0.32	0.40	10.05	100
	1923–24	63.08	2.67	0.74	0.31	10.52	100
	1924–25	68.53	1.75	1.36	0.22	9.21	100
Jewellery, timepieces, and fancy goods	1913 ..	36.14	6.11	18.28	1.34	9.58	100
	1921–22	43.67	5.93	0.00	4.89	13.12	100
	1922–23	41.70	6.86	2.21	6.21	10.87	100
	1923–24	38.74	6.27	5.42	4.12	12.70	100
	1924–25	37.83	5.71	10.63	3.44	9.33	100
Earthenware, cements, glass, etc.	1913 ..	41.52	2.57	28.94	1.37	4.02	100
	1921–22	63.59	1.07	0.00	10.72	8.84	100
	1922–23	59.47	0.91	0.49	10.03	7.06	100
	1923–24	59.91	0.71	1.31	7.45	9.01	100
	1924–25	60.47	1.28	2.92	5.82	7.64	100
Drugs, chemicals, and fertilizers	1913 ..	37.49	9.02	11.18	5.11	7.74	100
	1921–22	48.31	6.43	0.15	1.43	17.43	100
	1922–23	50.88	6.84	1.49	0.81	15.06	100
	1923–24	48.36	5.70	2.29	1.12	14.82	100
	1924–25	45.47	5.61	2.85	0.98	14.90	100
Rubber and leather and manufactures thereof, and substitutes therefor	1913 ..	28.26	4.00	20.21	0.04	25.27	100
	1921–22	31.79	8.55	0.00	0.07	32.13	100
	1922–23	26.01	5.76	0.59	0.03	43.57	100
	1923–24	19.80	4.23	0.39	0.06	45.52	100
	1924–25	23.64	5.48	0.78	0.04	42.83	100
Total above-mentioned articles	1913 ..	58.38	3.61	10.68	1.24	10.86	100
	1921–22	60.15	3.33	0.10	4.19	14.84	100
	1922–23	61.15	2.91	0.44	3.41	15.53	100
	1923–24	55.65	3.55	0.86	2.92	20.60	100
	1924–25	56.93	3.42	1.43	3.20	19.05	100
Total imports (less bullion and specie)	1913 ..	52.37	2.84	8.99	1.22	13.95	100
	1921–22	51.44	2.65	0.08	3.48	18.27	100
	1922–23	51.92	2.45	0.45	2.99	18.87	100
	1923–24	45.25	2.92	0.97	2.53	24.59	100
	1924–25	47.09	2.88	1.54	2.83	22.58	100

The total value of the commodities included in the competitive classes increased from £55,082,613 during 1913 to £111,650,632 during 1924–25. The two classes of goods which bulked largely in these totals were—(*a*) metals, metal manufactures and machinery, and (*b*) apparel, attire, and manufactured fibres. The value of goods included in these two groups represented 79 per cent. of the total value of competitive commodities during 1924–25.

Of the total value of competitive goods the United Kingdom supplied 56.93 per cent. during 1924–25 as against 58.38 per cent. during 1913 and 61.15 per cent. during 1922–23. In five of the nine competitive groups of imports, the proportion supplied by the United Kingdom increased during 1924–25 as compared with the previous year. The United Kingdom supplied Australia during 1924–25 with 82.26 per cent. of the total oversea purchases of spirituous and alcoholic liquors; 63.20 per cent. of apparel and attire; 68.53 per cent. of paper and stationery; 60.47 per cent. of earthenware, glassware, etc.; and 54.01 per cent. of metal manufactures and machinery.

The share of Japan in the competitive trade increased from 1.24 per cent. in 1913 to 4.19 per cent. in 1921–22, but fell to 3.20 per cent. in 1924–25. The classes of goods chiefly imported from Japan are as follows:—Apparel and textiles, metal manufactures and machinery, china and porcelain ware, earthenware, glass and glassware, paper and stationery, and fancy goods.

The position of the United States in this competitive trade has improved from 10.86 per cent. in 1913 to 19.05 per cent. in 1924–25, a figure slightly lower than in 1923–24, when it represented 20.60 per cent. In the latest pre-war year (1913), the value of goods from the United States in the "competitive" groups was £5,982,659, whereas in 1924–25 it was £21,268,285. The following are the principal groups of commodities in which United States sales to Australia during 1924–25 were increased over those of 1913:—Apparel and textiles, manufactured metals and machinery (including motor cars, chassis, etc.), and rubber and manufactures thereof.

The position of France declined from 3.61 per cent. in 1913 to 3.42 per cent. in 1924–25. The proportion supplied by France has, however, not varied greatly, as the imports during the five years under review have represented about 3 per cent. of the competitive trade.

The proportion of the imports supplied by Germany in 1913 was 10.68 per cent. as compared with 58.38 per cent. from the United Kingdom; 3.61 per cent. from France; 1.24 per cent. from Japan; and 10.86 per cent. from the United States. The corresponding figures for the year 1924–25 were:—Germany, 1.43 per cent.; United Kingdom, 56.93 per cent.; France, 3.42 per cent.; Japan, 3.20 per cent.; and the United States, 19.05 per cent.

From the foregoing it will be seen that the more prominent position held by the United States of America and by Japan in the Australian import market in 1923–24 and 1924–25 was not altogether at the expense of the United Kingdom, but represented a substitution of the trade formerly supplied by Germany.

Comparing the percentages of imports from each country during the period 1921–22 to 1924–25 it will be noticed that the proportions supplied by the United States, France and Germany increased, while those from Japan and the United Kingdom decreased.

2. **Preferential Tariffs.**—The Commonwealth Tariff Act of 1908 provided Preferential Tariff rates in favour of goods produced or manufactured in the United Kingdom. Subsequent amendments of the Tariff have extended the list of articles to which the preferential rates apply. This favourable treatment of the United Kingdom was again extended by the Tariff submitted on the 24th March, 1920 (Tariff Act 1921).

On the introduction of the preferential treatment of British goods by the Commonwealth Tariff, it was required that British material or labour should represent not less than one-fourth the value of such goods. From the 1st September, 1911, it was required in regard to goods only partially manufactured in the United Kingdom, that the final process or processes of manufacture should have been performed in the United Kingdom and that the expenditure on material of British production and/or British labour should have been not less than one-fourth of the factory or works cost of the goods in the finished state. These conditions were superseded during the year 1925.

Important alterations in the conditions governing the entry of goods into the Commonwealth under the British Preferential Tariff were made during 1925. The amended conditions apply in regard to goods which are invoiced to Australia on and after 1st April, 1925.

Under the new conditions Preference is granted in the Commonwealth as follows :—

(*a*) To goods which are wholly produced or wholly manufactured in the United Kingdom.

As to manufactured goods, these will only be considered " wholly manufactured in the United Kingdom " if in the raw materials used and also in the finished goods no manufacturing process has been performed outside the United Kingdom which is being commercially performed in the United Kingdom.

The Minister shall determine what are to be regarded as raw materials, and in such determination may include partially manufactured Australian materials.

(*b*) To goods, not wholly produced or wholly manufactured in the United Kingdom in the terms of paragraph (*a*), provided they contain at least 75 per cent. of United Kingdom labour and/or material in their factory or works cost.

(*c*) Notwithstanding anything contained in the preceding paragraphs, to goods of a class or kind not commercially manufactured in Australia provided they contain at least 25 per cent. of United Kingdom labour and/or material in their factory or works cost.

(*d*) It is essential in every case that the final process or processes of manufacture shall take place in the United Kingdom, and that the goods are consigned therefrom direct to Australia.

It is also provided that the conditions of preference set out above shall apply (in addition to goods from the United Kingdom) to goods, claiming preference, shipped from any country to which the Commonwealth of Australia has extended Tariff Preference, whether the rates granted be those of the "British Preferential Tariff," the " Intermediate Tariff," or special rates.

On the basis of the imports during 1913, the preferential provisions of the Tariff of 1908–11 covered 65 per cent. of the imports of merchandise of United Kingdom origin, the margin of preference being equal to 5 per cent. of the value of the goods. On the same basis the Tariff of 1921 has extended the application of the Preferential Tariff rates to 90 per cent. of the imports from the United Kingdom, and, at the same time, has increased the margin of preference to 12.2 per cent. *ad valorem.* The average equivalent *ad valorem* rate of duty payable under the Tariff of 1921 on goods of United Kingdom origin is about 26 per cent., whereas the same goods under the General Tariff rates would be called upon to pay an average rate of about 38 per cent.

An application of the Tariff of 1921 to the imports from the United Kingdom entered for home consumption during the year 1921–22 shows that over 90 per cent. of these imports were allotted a margin of 12.6 per cent. *ad valorem*, representing about £5,573,000 additional duty which would have been paid had the same goods been imported under the General Tariff rates. A similar computation applied to the imports from the United Kingdom during 1924-25 shows that approximately £7,975,000 additional duty would have been paid if the imports had been dutiable under the General Tariff rates, representing a margin in this case of 12.2 per cent. *ad valorem.*

3. Reciprocal Tariffs.—(i) *General.* The Tariff Act of 1921 introduced a new feature into Australian Tariffs in the form of an Intermediate Tariff. In submitting the schedule to Parliament, the Minister for Trade and Customs made the following statement of the object of the Intermediate Tariff :—" . . . . the Minister is empowered under the Bill to enter into reciprocal arrangements with other Dominions of the British Crown. The Minister will be able, if we can arrange a satisfactory reciprocal agreement, to extend to other Dominions on individual items the British preference rate, or the intermediate rate, or, it may be, the general rate. Such agreements will be subject to the ratification of Parliament. The provision simply means that if any of our sister self-governing Dominions desires to enter into reciprocal trade relationships with us, the Minister, with the British Preference Tariff, the Intermediate Tariff, and the General Tariff before him, may bargain with the sister Dominion and come to an agreement which, as I say, must subsequently be ratified by Parliament. . . . . There is a provision of a somewhat similar character in regard to other countries than the Dominions, the only difference being that the Minister is empowered to extend to countries other than the Dominions only the Intermediate Tariff; that is to say, in entering into such negotiations, he is precluded from offering to those countries what we might term, for the purposes of this Bill, the Empire rate. He is confined in his negotiations with these other countries to the Intermediate Tariff."

(ii) *Union of South Africa.* Until 1922, the Union of South Africa was the only British Dominion with which Australia had a reciprocal Tariff arrangement. The Commonwealth Customs Tariff (South African Preference) Act, No. 17 of 1906 and subsequent amending Acts have provided preferential rates of duty to be applied to certain imported goods " when those goods are imported from and are the produce or manufacture of any of the British South African Colonies or Protectorates which are included within the South African Customs Union."

The Customs Tariff (South African Preference) 1906 was repealed by the Customs Tariff, 1926. The repeal came into operation on the 1st July, 1926, at nine o'clock in the forenoon, and thereafter the provisions of the Customs Tariff 1921–1926 applied in relation to goods imported from South Africa which are entered for home consumption after that time.

(iii) *Dominion of New Zealand.* On the 11th April, 1922, an agreement was made between the Commonwealth of Australia and the Dominion of New Zealand whereby goods specified in the schedule attached to the agreement should be admitted at the rates of duty set out in the schedule. In addition to the goods specially mentioned in the schedule, it is provided that " all other goods being the produce or manufacture of Australia or New Zealand shall be dutiable at the rates applicable to goods being the produce or manufacture of the United Kingdom, upon entry into New Zealand or Australia respectively." This agreement was ratified by the Commonwealth Parliament by the Customs Tariff (New Zealand Preference) 1922, and, by Proclamation dated 24th August, 1922, came into operation on the 1st September, 1922.

(iv) *Dominion of Canada.* The negotiations for a reciprocal trade treaty between Canada and Australia reached finality during September, 1925, and a reciprocal Tariff agreement between the two countries is now in operation. The commodities on which Canada grants preferential rates of duty to Australia are :—Butter, brandy, champagne, cheese, currants, eggs, fruits (dried and fresh), fruits in cans, glue, honey, lard, meat (fresh and canned), onions, raisins, tallow, and wine. Australia's preferential duties will apply to the following Canadian imports :—Corsets, fish, fruit pulp, gloves, goloshes and rubber sand boots, etc., iron and steel tubes or pipes, printing machinery, paper (printing, typewriting and writing), sugar, and canned vegetables.

(v) *Papua and New Guinea.* Customs Tariff (Papua and New Guinea) Preference 1926 provides for Customs Preference on goods the produce of Papua and on goods the produce of the Territory of New Guinea. Imports into Australia, direct from the Territory of Papua or the Territory of New Guinea, of such of the goods specified in the schedule to the Act as were produced in the Territory from which they were imported, shall, notwithstanding anything contained in the Customs Tariff 1921–1924, be free of duty. The goods specified in the schedule are coffee, dried fruit, viz., litchi, fresh fruits (various local fruits), edible fungi, green ginger, coco-nuts and kapok and sesame seeds.

4. Preferential Tariff of the United Kingdom.—The post-war Tariff of the United Kingdom provides Preferential Customs rates on certain goods where they are shown to the satisfaction of the Commissioners of Customs and Excise to have been consigned from and grown, produced, or manufactured in the British Empire. Manufactured articles generally are not entitled to the preferential rates unless 25 per cent. of their value is the result of labour within the British Empire. The principal items of interest to Australia which are accorded preferential treatment under the Tariff of the United Kingdom are :—Fruits, dried and preserved; jam; fruit pulp; preserved milk; wine; and brandy.

The question of Tariff Preference was discussed at the Imperial Economic Conference held in 1923, when the following resolution was adopted :—

> " This Imperial Economic Conference, holding that, especially in present circumstances, all possible means should be taken to develop the resources of the Empire and trade between the Empire Countries, desires to affirm the resolution on the subject of Imperial Preference passed by the Imperial War Conference of 1917."

The resolution was agreed to by all delegates, including the representative from Great Britain. The British Ministry in power at the time was prepared to grant certain increased preferences, but stipulated that their proposals could not go beyond the established fiscal system.

Before the proposals could be submitted to the British Parliament the Ministry in power at the date of conference was defeated. The new Prime Minister (Mr. Ramsay MacDonald) announced, however, that the Imperial Preference resolutions of the Imperial Economic Conference would be discussed in the House of Commons during June, 1924, and that the debate would be unfettered and the votes on non-party lines. The proposals duly came before Parliament, and as a result of the debate on Imperial Preference, the first four resolutions, which proposed Imperial Preference without imposing any new charge upon the foreigner, were defeated by small majorities. The other six resolutions, of which notice had been given, were then withdrawn.

After the election of October, 1924, a new Ministry, with Mr. Stanley Baldwin as Prime Minister, came into office and, in the Budget submitted to the House of Commons during June, 1925, clauses dealing with increased Imperial preference on Empire-grown tobacco, preserved and dried fruits, jams and jellies, spirits, wine, sugar, and hops were proposed and adopted. The new rates of duty took effect on 1st July, 1925, excepting that relating to hops, which came into operation on 16th August, 1925.

Particulars of the imports into the United Kingdom of the quantities of Australian produce of the above commodities during the twelve months since the introduction of the new preferential rates will not be available for some time, therefore it is not possible to compute the actual effect of the concessions.

On the basis of the quantities of dried fruits, spirits, wine, sugar, canned fruits and jams and jellies imported into the United Kingdom from Australia during the year 1924, as shown in the Annual Statement of the Trade of the United Kingdom, it is estimated that £427,000 additional duty would have been collected if the same quantities of goods had been dutiable under the rates applicable to imports from foreign countries.

§ 15. Commonwealth Trade Representation in Overseas Countries.

The Commonwealth is represented in the United Kingdom by the High Commissioner for Australia (Rt. Hon. Sir Joseph Cook, P.C., G.C.M.G.), with headquarters at Australia House, London. Oversea trade matters affecting Australia come within the scope of the duties attaching to the office of High Commissioner.

The Commonwealth has a Trade Representative in France, with headquarters at Paris. This official is attached to the High Commissioner's office, London.

The first appointment of a Commissioner for Australia in the United States of America was made in 1918. The present Commissioner, Mr. (now Sir) J. A. M. Elder, was appointed on 11th September, 1924, with headquarters at New York. Oversea trade matters affecting Australia come within the scope of the duties attaching to the office of Commissioner in United States of America.

Early in 1921 a Commonwealth Trade Commissioner was appointed in China, with offices at Shanghai and Hong Kong. This office was terminated in 1923. In 1922, an Australian Trade Representative in the East was appointed, with headquarters at Singapore, but the appointment was terminated in March, 1925.

CHAPTER VII.

TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 1. System of Record.

So far as oversea vessels are concerned the system of record treats Australia as a unit, and counts, therefore, only one entry and one clearance for each voyage, without regard to the number of States visited.

On the arrival at, or departure from, a port in Australia, whether from or for an oversea country or from another port in Australia, the master or agent must " enter " the vessel with the Customs authorities at the port, and supply certain prescribed information in regard to the ship, passengers, and cargo. At the end of each month the information so obtained is entered on forms which are forwarded to the Commonwealth Bureau of Census and Statistics. These forms, which collectively provide a complete record of the movements of every vessel in Australian waters, furnish the material for the compilation of the Shipping and Migration Returns. The arrangement referred to has been in operation since the 1st July, 1924.

Since the 1st July, 1922, the electric tabulating machinery originally installed for the purposes of the 1921 census has been used in the tabulation of the shipping returns. The results have been very satisfactory, and a considerable saving in time has been effected as compared with the previous manual tabulation.

From the 1st July, 1914, the statistical year for the record of Trade and Shipping of Australia was altered from the calendar year to the fiscal year ending 30th June.

In all instances the tonnage quoted is net tonnage.

§ 2. Oversea Shipping.

1. **Total Movement.**—The following table gives the number and tonnage of oversea steam and sailing vessels entering Australian ports during the years 1920–21 to 1924–25 :—

TOTAL OVERSEA SHIPPING, ENTERED.—AUSTRALIA, 1920-21 TO 1924-25.

Year.	Steam.		Sailing.		Total.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
1920–21	1,526	4,422,880	304	336,036	1,830	4,758,916
1921–22	1,429	4,466,655	138	93,726	1,567	4,560,381
1922–23	1,341	4,599,021	148	138,833	1,489	4,737,854
1923–24	1,437	4,808,129	109	103,007	1,546	4,911,136
1924–25	1,675	5,535,871	51	60,529	1,726	5,596,400

The average tonnage of vessels entered has risen from 2,600 tons per vessel in 1920–21 to 3,242 tons in 1924–25.

Particulars regarding the total oversea movement of shipping for each year from 1822 to 1920–21 will be found in Official Year Book No. 15, p. 507.

2. **Comparison with other Countries.**—The place of Australia among various countries in regard to oversea shipping is indicated in the following table, which gives the latest available figures for total tonnage and tonnage per head of population.

OVERSEA SHIPPING.—VARIOUS COUNTRIES.

Country.	Calendar Year.	Tonnage Entered and Cleared.	
		Total. .000 omitted.	Per Inhabitant.
Australia	1925(*a*)	11,201	1.89
Belgium	1924	44,659	5.57
Brazil	1924	65,818	2.15
Canada	1924	37,018(*c*)	3.90
France	1925	80,828(*b*)	2.06
Germany	1924	59,632	0.95
Great Britain	1924	175,836	3.66
India	1924	17,656	0.06
Japan	1924	85,767	1.06
Netherlands	1924	47,498	6.49
New Zealand	1925	4,440	3.22
Norway	1924	11,864	4.48
Spain	1923	45,359	2.06
Sweden	1924	24,569	4.07
Union of South Africa	1923	12,692	1.74
United States	1925	138,868(*c*)	1.31

(*a*) To 30th June. (*b*) With cargoes only. (*c*) Exclusive of vessels trading on lakes and rivers between Canada and the United States.

3. **Shipping Communication with various Countries.**—In view of the defects in records purporting to show vessels and tonnage for particular countries (as pointed out on p. 265 of Official Year Book No. 17) it has been decided to restrict the statistics relating to the direction of shipping to and from Australia to the following tables in which countries situated on the main trade routes have been grouped. The grouping into larger geographical divisions to some extent avoids the limitations referred to, except in the case of Africa owing to its geographical situation as a place of call for vessels proceeding to or from other ports.

OVERSEA SHIPPING, AUSTRALIA.—DIRECTION, 1920-21 TO 1924-25.

Countries.	Cargo and Ballast.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
		TONNAGE ENTERED.				
United Kingdom and European Countries	Cargo	1,102,994	1,333,469	1,926,907	1,769,446	1,797,322
	Ballast	269,351	204,680	72,819	23,690	186,256
New Zealand	Cargo	518,789	421,365	392,526	500,001	459,252
	Ballast	350,370	213,347	167,187	401,959	393,706
Asiatic Countries and Islands in the Pacific	Cargo	837,195	686,886	821,036	893,179	1,002,634
	Ballast	631,004	794,175	279,043	188,762	390,300
Africa	Cargo	21,298	36,170	32,025	25,036	26,709
	Ballast	236,320	215,841	122,660	24,015	145,216
North and Central America	Cargo	747,599	629,688	911,026	1,059,229	1,138,091
	Ballast	8,747	15,940	2,944	5,403	17,235
South America	Cargo	8,236	1,179	5,470	12,039	13,895
	Ballast	27,013	7,641	4,211	8,377	25,784
	Cargo	3,236,111	3,108,757	4,088,990	4,258,930	4,437,903
	Ballast	1,522,805	1,451,624	648,864	652,206	1,158,497
Total	..	4,758,916	4,560,381	4,737,854	4,911,136	5,596,400
		TONNAGE CLEARED.				
United Kingdom and European Countries	Cargo	1,864,330	1,819,444	2,193,528	2,127,662	2,786,002
	Ballast	15,421	13,951	11,776	13,699	8,097
New Zealand	Cargo	789,094	542,865	518,972	792,565	768,625
	Ballast	24,254	43,140	49,097	61,943	59.349
Asiatic Countries and Islands in the Pacific	Cargo	1,123,141	1,116,430	922,243	1,066,807	1,033,553
	Ballast	52,374	27,644	100,832	193,982	224,522
Africa	Cargo	387,649	581,359	121,175	105.127	174,697
	Ballast	7,506	..	..	3,558	14,020
North and Central America	Cargo	294,145	345,817	436,800	443,864	408,476
	Ballast	22,673	3,488	35,011	75,201	58,762
South America	Cargo	162,974	26,759	89,816	118,525	64,433
	Ballast	541	..	23,675	8,745	3,583
	Cargo	4,621,333	4,432,674	4,282,534	4,654,550	5,235,786
	Ballast	122,769	88,223	220,391	357,128	368,333
Total	..	4,744,102	4,520,897	4,502,925	5,011,678	5,604,119

4. Nationality of Oversea Shipping.—(i) *General.* The greater part of the shipping visiting Australia is of British nationality, though in 1924–25 the proportion of British tonnage, 76.05 per cent., was the lowest recorded since 1920–21, in which year the percentage was 69.69 per cent.

Particulars of the nationality of oversea shipping for the last five years are given in the following table :—

OVERSEA SHIPPING, AUSTRALIA.—NATIONALITY OF VESSELS ENTERED, 1920-21 TO 1924-25.

Nationality.	Tonnage.				
	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
BRITISH—					
Australian	551,100	589,175	645,867	486,170	424,634
United Kingdom	2,541,310	2,802,487	2,754,316	2,939,210	3,209,865
Canadian	38,569	88,526	110,095	95,655	70,165
New Zealand	149,650	103,471	66,521	307,928	488,481
Other British	35,623	54,464	72,438	55,302	62,772
Cargo	2,529,089	2,568,236	3,226,702	3,342,994	3,418,124
Ballast	787,163	1,069,887	422,535	541,271	837,793
Total British	3,316,252	3,638,123	3,649,237	3,884,265	4,255,917
Per cent. on total	69.69	79.78	77.02	79.09	76.05
FOREIGN—					
Danish	24,542	28,416	39,394	54,161	43,311
Dutch	133,613	134,662	141,264	138,716	162,385
French	107,990	69,033	114,102	84,701	104,312
German	..	..	44,666	44,354	81,213
Italian	128,466	105,159	50,608	61,312	115,931
Japanese	505,989	218,564	243,935	143,954	297,657
Norwegian	132,647	123,218	148,873	173,311	219,258
Swedish	85,405	65,971	82,230	90,641	86,704
United States	273,989	139,686	194,180	191,938	186,089
Other Foreign	50,023	37,549	29,365	43,783	43,623
Cargo	707,022	540,521	862,288	915,936	1,019,779
Ballast	735,642	381,737	226,329	110,935	320,704
Total Foreign	1,442,664	922,258	1,088,617	1,026,871	1,340,483
Per cent. on total	30.31	20.22	22.98	20.91	23.95
Cargo	3,236,111	3,108,757	4,088,990	4,258,930	4,437,903
Per cent. on total	68.00	68.17	86.30	86.72	79.30
Ballast	1,522,805	1,451,624	648,864	652,206	1,158,497
Per cent. on total	32.00	31.83	13.70	13.28	20.70
Grand Total	4,758,916	4,560,381	4,737,854	4,911,136	5,596,400

The Australian tonnage which entered Australia from overseas during the year 1924–25 represented 7.59 per cent. of the total tonnage entered. This figure was less than the average for the quinquennium, which was 11.12 per cent.

(ii) *Proportion of British and Foreign with Cargo.* (*a*) *Tonnage of Vessels.* The relative proportions of British and foreign tonnage which entered Australia with cargo during the last five years are given in the next table. These figures may be considered to indicate more accurately the proportion of the actual carrying trade done than does the total tonnage.

OVERSEA SHIPPING, AUSTRALIA.—PERCENTAGE BRITISH AND FOREIGN ENTERED WITH CARGO, 1920-21 TO 1924-25.

Nationality.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
British	78.15	82.61	78.91	78.49	77.02
Foreign	21.85	17.39	21.09	21.51	22.98
Total	100.00	100.00	100.00	100.00	100.00

During the period under review the average annual tonnage of foreign vessels entering with cargo was 21.15 per cent.

(*b*) *Tonnage of Cargo.* In Transport and Communication Bulletin, No. 17 (p. 37) published by this Bureau, a statement is given of the tonnage of oversea cargo discharged and shipped during the year 1924–25 according to the nationalities of the vessels engaged in the carrying trade.

While the tonnage of British vessels entering with cargo represented 77.02 per cent. of the total, the amount of cargo discharged from such vessels was 74.49 per cent. The most important foreign country engaged in the shipping trade with Australia was Japan, its vessels contributing 4.80 per cent. of the total tonnage entered with cargo and 5.68 per cent. of the total cargo discharged and 6.45 per cent. of the cargo shipped.

(iii) *Principal Foreign Countries Engaged.* The following table shows the tonnage entered and cleared in connexion with the principal foreign countries engaged in the oversea carrying trade of Australia :—

OVERSEA SHIPPING, AUSTRALIA.—FOREIGN TONNAGE, 1924-25.

Countries.	Nationality.							
	Japanese.		French.		United States.		Dutch.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
EUROPEAN COUNTRIES—								
United Kingdom ..	..	45,369	..	8,695	542	2,128	..	22,412
France	..	3,406	50,967	28,019	..	..	..	4,450
Other European Countries	..	10,943	..	20,749	..	..	79,840	65.205
ASIATIC COUNTRIES AND ISLANDS IN THE PACIFIC—								
Netherlands East Indies	..	..	..	..	10,260	24,255	33,118	23,738
Japan	220,592	225,378	..	..	..	..	..	..
Straits Settlements ..	..	..	..	..	3,430	..	31,615	30,512
Other Asiatic Countries	1,283	14,452	1,109	2,218	..	7,899	4,794	3,162
New Zealand	..	..	..	..	1,106	1,106	8,773	5,984
New Caledonia ..	..	..	46,147	40,722	..	..	2,060	..
Other Pacific Islands ..	2,884	..	2,890	3,245	..	..	15	15
AFRICAN COUNTRIES ..	..	8,080	3,199	..	..	..	..	2,964
NORTH AMERICAN COUNTRIES—								
United States ..	68,860	..	..	..	165,042	145,469	..	2,789
Canada	4,038	..	..	..	5,709	..	..	..
SOUTH AMERICAN COUNTRIES	..	..	..	..	..	6,850	2,170	..
With Cargo ..	212,804	307,628	92,315	101,430	184,983	156,247	108,717	149,951
In Ballast ..	84,853	..	11,997	2,218	1,106	31,460	53,668	11,280
Total	297,657	307,628	104,312	103,648	186,089	187,707	162,385	161,231

The largest proportion of the foreign tonnage entered is employed between its home ports or the colonies of its own country and Australia, e.g., French shipping is engaged chiefly between Australia, France and New Caledonia, while Dutch ships are employed almost entirely between Australia and the Netherlands, the Netherlands East Indies, or Straits Settlements. The bulk of the Japanese tonnage was recorded as entering from Japan, although there was increased activity recorded in carrying cargoes from the United States of America.

(iv) *Nationality of Steam and Sailing Tonnage.* A further analysis is appended, distinguishing between steam and sailing vessels of British and foreign nationality which entered Australia during the years 1920–21 to 1924–25.

OVERSEA SHIPPING, AUSTRALIA.—NATIONALITY OF STEAM AND SAILING VESSELS ENTERED, 1920-21 TO 1924-25.

Description and Nationality of Vessels.	1920–21.		1921–22.		1922–23.		1923–24.		1924–25.	
	Tonnage.	Percentage.	Tonnage.	Percentage.	Tonnage.	Percentage.	Tonnage.	Percentage.	Tonnage.	Percentage.
Steam—										
British ..	3,232,463	73	3,597,388	81	3,634,411	79	3,866,900	80	4,242,511	77
Foreign ..	1,190,417	27	869 267	19	964,610	21	941,229	20	1,293,360	23
Total Steam	4,422,880	100 (93)	4,466,655	100 (98)	4,599.021	100 (97)	4,808,129	100 (98)	5,535,871	100 (99)
Sailing—										
British ..	83,789	25	40,735	43	14,826	11	17,365	17	21,729	36
Foreign ..	252,247	75	52,991	57	124,007	89	85,642	83	38,800	64
Total Sailing	336,036	100 (7)	93,726	100 (2)	138,833	100 (3)	103,007	100 (2)	60,529	100 (1)
Steam and Sailing—										
British ..	3,316,252	70	3,638,123	80	3,649,237	77	3,884,265	79	4,255,917	76
Foreign ..	1,442,664	30	922,258	20	1,088,617	23	1,026.871	21	1,340,483	24
Total ..	4,758,916	100	4,560,381	100	4,737,854	100	4,911,136	100	5,596,400	100

As might naturally be expected there was a considerable decline in the figures for sailing tonnage during the period under review.

5. **Tonnage in Ballast.**—(i) *Total and Percentage by Nationality.* The following table shows the tonnage according to nationality of oversea vessels which entered and cleared Australia in ballast during the years 1920–21 to 1924–25 :—

OVERSEA SHIPPING, AUSTRALIA.—TONNAGE IN BALLAST, 1920-21 TO 1924-25.

Year.	Entered.			Cleared.		
	British.	Foreign.	Total.	British.	Foreign.	Total.
			TOTAL TONNAGE.			
1920–21 ..	787,163	735,642	1,522,805	75,356	47,413	122,769
1921–22 ..	1,069,887	381,737	1,451,624	79,377	8,846	88,223
1922–23 ..	422,535	226,329	648,864	155,605	64,786	220,391
1923–24 ..	541,271	110,935	652,206	254,069	103,059	357,128
1924–25 ..	705,398	453,099	1,158,497	164,972	203,361	368,333
			PERCENTAGE.			
1920–21 ..	23.74	50.99	32.00	2.27	3.32	2.59
1921–22 ..	29.41	41.39	31.83	2.22	0.93	1.95
1922–23 ..	11.58	20.79	13.70	4.49	6.23	4.89
1923–24 ..	13.93	10.80	13.28	6.48	9.45	7.13
1924–25 ..	16.57	33.80	20.70	4.41	10.93	6.57

(ii) *Tonnage entered in Ballast—States.* The tonnage which entered each State in ballast during 1924–25 was as follows :—

OVERSEA TONNAGE IN BALLAST ENTERING STATES, 1924-25.

State.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Tonnage ..	555,662	182,377	4,555	138,624	241,954	20,802	14,523	1,158,497
Percentage on total ..	47.96	15.74	0.39	11.97	20.89	1.80	1.25	100.00

In normal times the large exports of coal from New South Wales afford special inducements to vessels in search of freights. The tonnage in ballast into New South Wales is mainly for coal cargo, into Victoria for wheat, into South Australia for wheat and ore, and into Western Australia for timber and wheat.

§ 3. Shipping of Ports.

1. **Tonnage Entered.**—The total shipping tonnage—oversea, interstate, and coastwise—which entered the more important ports of Australia during the year 1924–25, together with similar information in regard to some of the ports of New Zealand for the year 1924 and of Great Britain for the year 1924—will be found in the next table :—

SHIPPING OF PORTS, AUSTRALIA, NEW ZEALAND, AND THE UNITED KINGDOM.

Port.	Tonnage Entered.	Port.	Tonnage Entered.
AUSTRALIA—		ENGLAND AND WALES—	
Sydney	9,131,675	London	22,745,073
Melbourne	6,939,642	Liverpool (inc. Birkenhead)	15,502,986
Newcastle	5,120,541	Tyne Ports	10,843,111
Adelaide	4,935,155	Southampton	10,243,992
Brisbane	3,245,938	Cardiff	10,070,558
Fremantle	3,032,845	Hull	6,277,793
Townsville	1,035,706	Plymouth	4,918,739
Hobart	737,633	Swansea	3,846,363
Pirie	730,550	Newport	3,477,260
Albany	648,585	Bristol	3,412,523
Kembla	630,429	Manchester (inc. Runcorn)	3,330,185
Cairns	607,982	Middlesbrough	3,278,221
Geelong	562,379	Sunderland	3,003,029
Mackay	486,953	Grimsby (inc. Immingham)	2,640,946
Bunbury	440,378	Blyth	2,230,249
Rockhampton	436,275	Beaumaris (inc. Holyhead)	2,017,663
Burnie	399,909	Dover	1,756,267
Launceston	380,881	Falmouth	1,364,327
Wallaroo	334,116		
Devonport	326,511		
Bowen	321,990	SCOTLAND—	
Thursday Island	313,985	Glasgow	6,057,273
NEW ZEALAND—		Leith	2,164,263
Wellington	2,985,743		
Auckland	2,355,124		
Lyttelton	1,867,824	NORTHERN IRELAND—	
Otago	1,077,101	Belfast	4,418,406

§ 4. Vessels Built and Registered.

1. **Vessels Built.**—The following table shows the number and tonnage of vessels built in Australia during each of the calendar years 1921 to 1925, so far as such information can be ascertained from the Shipping Registers of the various States. The Merchant Shipping Act, under which vessels are registered in Australia, does not, however, make it compulsory to register vessels under 15 tons burthen if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners. As the Shipping Registers are the source of information, it follows that the figures given below will be subject to additions in the future, inasmuch as vessels already built may be added to the register at some future date.

VESSELS BUILT IN AUSTRALIA, 1921 TO 1925.

NUMBER.

Year.	Steamers built of—					Oil Motor Vessels.	Sailing.	Pontoons, Dredges, etc.	Total.
	Wood.	Iron.	Steel.	Composite.	Total.				
1921 ..	2	..	5	..	7	6	3	..	16
1922 ..	4	..	5	..	9	8	8	..	25
1923 ..	..	..	3	1	4	8	1	2	15
1924 ..	2	..	2	..	4	10	..	..	14
1925 ..	..	..	5	..	5	8	1	..	14

TONNAGE.

Year.	Steamers.		Oil Motor Vessels.		Sailing.		Pontoons, Dredges, etc.		Total.	
	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.
1921 ..	14,129	8,044	69	57	27	23	..	..	14,225	8,124
1922 ..	9,239	5,093	197	152	304	251	..	..	9,740	5,496
1923 ..	7,089	4,011	140	101	100	80	414	386	7,743	4,578
1924 ..	19,665	11,480	298	215	..	..	..	..	19,963	11,695
1925 ..	4,074	1,478	197	157	13	13	..	..	4,284	1.648

2. **Vessels Registered.**—The following table shows the number and net tonnage of steam, sailing, and other vessels on the registers of the States and of the Northern Territory on the 31st December, 1925 :—

VESSELS ON THE STATE REGISTERS, 31st DECEMBER, 1925.

State.	Steam.				Sailing.				Barges, Hulks, Dredges, etc., not Self-propelled.		Total.	
	Dredges and Tugs.		Other.		Fitted with Auxiliary Power.		Other.					
	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.
New South Wales ..	50	1,389	473	152,057	211	2,980	236	11,536	50	13,762	1,020	181,724
Victoria	28	3,709	152	134,058	38	1,118	66	3,139	69	28,057	353	170,081
Queensland ..	19	2,799	61	20,572	37	490	101	1,539	32	4,405	250	29,805
South Australia ..	16	662	79	34,894	47	2,906	38	1,051	51	8,804	231	48,317
Western Australia	10	191	26	12,106	15	343	328	4,827	23	7,210	402	24,677
Tasmania ..	6	498	54	9,287	49	1,223	71	2,755	2	563	182	14,326
Northern Territory	..	..	..	..	1	17	22	217	..	..	23	234
Total ..	129	9,248	845	362,974	398	9,077	862	25,064	227	62,801	2,461	469,164

Particulars of the number of vessels on the registers classified according to tonnage will be found in the Transport and Communication Bulletin issued by this Bureau.

§ 5. Interstate Shipping.

1. **System of Record.**—*Interstate Shipping* comprises two elements, viz. :—(*a*) Vessels engaged solely in interstate trade; and (*b*) Vessels trading between Australia and oversea countries and in the course of their voyage proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not now engage in interstate carrying.) A detailed explanation of the methods adopted in dealing with the returns under each heading will be found on page 272 of Official Year Book No. 17, but limitation of space preclude its repetition in the present volume.

2. **Vessels and Tonnage Entered.**—The following table gives the number and tonnage of vessels recorded as having entered each State from any other State during each of the years 1920-21 to 1924–25. The shipping on the Murray River, between the States of New South Wales, Victoria, and South Australia is not included.

INTERSTATE SHIPPING.—NUMBER AND TONNAGE OF VESSELS ENTERED, 1920-21 TO 1924-25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
			NUMBER.		
New South Wales ..	1,650	1,748	1,848	2,071	1,902
Victoria	1,614	1,797	1,886	1,920	1,815
Queensland	469	459	548	519	460
South Australia	603	724	822	867	798
Western Australia ..	431	484	364	363	421
Tasmania	987	1,072	1,169	1,193	1,091
Northern Territory ..	18	19	18	22	24
Total	5,772	6,303	6,655	6,955	6,511
			TONNAGE.		
New South Wales ..	3,297,358	3,614,744	4,278,072	4,677,576	4,581,395
Victoria	2,434,778	3,091,313	3,581,571	3,724,273	3,593,320
Queensland	770,233	857,715	1,123,192	1,032,101	1,041,754
South Australia	1,554,649	1,949,071	2,453,776	2,501,928	2,348,566
Western Australia ..	1,600,142	1,817,361	1,630,730	1,668,713	1,900,077
Tasmania	592,852	937,296	1,023,645	1,200,569	1,098,556
Northern Territory ..	36,269	52,814	52,107	54,347	57,658
Total	10,286,281	12,320,314	14,143,093	14,859,507	14,621,326

3. **Oversea Vessels Moving Interstate.**—To ascertain the aggregate movement of shipping between the States during the year 1924–25, including the total interstate

movements of oversea vessels, the figures in the following table, which give the number and tonnage of vessels entered from or cleared for oversea countries via other Australian States, must be added to those in the table preceding :—

SHIPPING ENTERED AND CLEARED FROM AND TO OVERSEA COUNTRIES VIA OTHER AUSTRALIAN STATES, 1924-25.

State.	Entered.		Cleared.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales ..	580	2,615,404	514	2,349,078	1,094	4,964,482
Victoria	532	2,454,034	489	2,182,881	1,021	4,636,915
Queensland	224	1,217,313	254	1,344,945	478	2,562,258
South Australia ..	323	1,616,982	253	1,308,456	576	2,925,438
Western Australia ..	40	150,024	14	56,649	54	206,673
Tasmania	35	142,327	78	418,394	113	560,721
Northern Territory ..	..	..	..	..	..	..
Total	1,734	8,196,084	1,602	7,660,403	3,336	15,856,487

Oversea vessels moving interstate are with few exceptions not engaged in the active interstate trade of Australia, but are merely proceeding to the several States in continuation of their oversea voyage.

4. **Vessels engaged Solely in Interstate Trade.**—Eliminating all interstate movements of oversea vessels, the number and tonnage of vessels engaged solely in the interstate trade for Australia as a whole during the years 1920–21 to 1924–25 were as follows :—

NUMBER AND TONNAGE OF VESSELS ENGAGED SOLELY IN INTERSTATE TRADE, 1920-21 TO 1924-25.

Year.	Entered.		Cleared.	
	No.	Tons.	No.	Tons.
1920–21	4,539	5,406,967	4,566	5,433,856
1921–22	4,897	6,464,999	4,885	6,335,396
1922–23	5,230	7,506,324	5,624	7,624,311
1923–24	5,565	8,228,391	5,546	8,109,094
1924–25	4,909	6,960,923	4,906	6,953,546

5. **Total Interstate Movement of Shipping.**—(i) *Australia.* The appended table shows the total inward interstate movement of shipping for each of the years 1920–21 to 1924–25 :—

TOTAL INWARD INTERSTATE MOVEMENT OF SHIPPING, 1920-21 TO 1924-25.

Vessels.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	Tons.	Tons.	Tons.	Tons.	Tons.
Oversea vessels moving interstate	10,001,668	11,579,340	14,214,800	14,437,674	15,856,487
Vessels solely interstate ..	5,406,967	6,464,999	7,506,324	8,228,391	6,960,923
Total	15,408,635	18,044,339	21,721,124	22,666,065	22,817,410

(ii) *States.* The following table shows the number and tonnage of vessels which entered and cleared each State during 1924–25, including the coastal movements of oversea vessels :—

INTERSTATE SHIPPING OF EACH STATE, 1924-25.

State.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales	2,482	7,196,799	2,403	6,958,302
Victoria	2,347	6,047,354	2,473	6,419,503
Queensland	684	2,259,067	717	2,388,246
South Australia	1,121	3,965,548	1,154	4,085,555
Western Australia	461	2,050,101	343	1,666,883
Tasmania	1,126	1,240,883	1,134	1,239,896
Northern Territory	24	57,658	18	51,648
Total, Australia	8,245	22,817,410	8,242	22,810,033

6. **Interstate and Coastal Services.**—The subjoined table gives particulars, so far as they are available, of all steamships engaged in regular interstate or coastal services at the end of each of the years 1921 to 1925 :—

AUSTRALIAN INTERSTATE AND COASTAL STEAMSHIP SERVICES, 1921 TO 1925.

Particulars.		1921.	1922.	1923.	1924.	1925.
Number of companies making returns		(*a*)39	32	35	39	41
Number of steamships		183	195	205	207	209
Tonnage	Gross	317,019	357,652	384,650	382,822	384,004
	Net	179,393	204,219	220,042	217,609	216,390
Horse-power (Nominal) ..		32,801	34,886	36,934	37,841	38,750
Number of passengers for which licensed	1st class ..	4,226	4,647	9,184	9,538	9,110
	2nd class and steerage	4,642	5,016	4,756	4,343	4,204
Complement of Crew	Masters and officers	571	667	704	681	684
	Engineers ..	551	607	645	631	645
	Crew	4,613	5,175	5,614	5,336	5,190

(*a*) In this year a number of small organizations were included for the first time.

§ 6. Tonnage of Cargo.

The table hereunder shows the aggregate tonnage of oversea cargo discharged and shipped in Australian ports, and the tonnage of interstate cargo shipped in all ports for the years 1920–21 to 1924–25. Cargo which was stated in cubic feet has been converted to weight on the basis of 40 cubic feet to the ton.

AUSTRALIAN SHIPPING—CARGO MOVEMENT, 1920-21 TO 1924-25.

Year.	Oversea Cargo.		Interstate Cargo.
	Discharged.	Shipped.	Shipped.
	Tons.	Tons.	Tons.
1920–21	3,201,215	5,925,133	4,993,678
1921–22	2,419,977	5,816,174	5,533,716
1922–23	3,718,795	4,064,196	5,137,651
1923–24	4,377,171	4,981,521	6,358,191
1924–25	4,696,112	6,498,098	6,413,975

More detailed information regarding the volume of trade at each of the principal ports is contained in Transport and Communication Bulletin No. 17 issued by this Bureau.

§ 7. Commonwealth Government Shipping and Shipbuilding Activities.

1. Local Building Programme.—The original Commonwealth Government programme of ship construction in Australia provided for 48 vessels, 24 of which were to be wooden sailing vessels, and the remainder steel cargo ships. Owing to certain variations, the programme resulted in the building of 21 steel cargo vessels and 2 five-masted schooners with auxiliary power.

Particulars of the vessels built in Australia to 31st December, 1922, were included in a previous issue of this book (see Year Book Nos. 16, p. 273 and 17, p. 269).

2. Vessels Built in the United Kingdom.—In addition to the vessels previously referred to, five steamers each approximately 8,450 tons net were constructed in yards in the United Kingdom.

These vessels have an approximate length of 520 feet by 68 feet beam, and a capacity of 900,000 cubic feet, of which 370,000 cubic feet are insulated.

3. Australian Commonwealth Line of Steamers.—(i) *Foundation of Line.* The Commonwealth Shipping Act 1923 provided for the establishment of the Australian Commonwealth Line of Steamers under the control of a Board of Directors consisting of not less than three nor more than five members. The date at which the Act was to come into force was fixed by proclamation as 1st September, 1923.

The whole of the right, title, and interest of the Commonwealth in and to the 50 vessels (155,302 tons net) of the Commonwealth Government Line of Steamers, and appurtenances used for the purposes of such vessels, was vested in the Board, also four other vessels (15,442 tons net) which were under construction at the time of transfer. The valuation of the vessels, tackle, apparel, gear, furniture, stores and equipment was fixed at £4,718,150, office furniture and fittings at £7,500, and stores on hand £23,700, making a total of £4,749,350.

4. Financial Position.—(*i*) *Profit and Loss Account.* The operations of the Australian Commonwealth Line of Steamers as shown by the Profit and Loss Account for the year ended 31st March, 1925, resulted in a net loss of £593,879 after meeting interest and depreciation charges (£384,515). The gross earnings of the fleet were £1,852,415, while the expenditure, other than interest, etc., charges was £2,061,780.

The gross earnings of Cockatoo Island Dockyards were £543,875 and the gross expenditure inclusive of interest, etc., charges (£44,443) was £538,779, thus showing a net profit of £5,096.

(*ii*) *Balance Sheet.* The balance sheet as at 31st March, 1925, has been taken from the Report of the Commonwealth Auditor-General.

BALANCE-SHEET AS AT 31ST MARCH, 1925.

Liabilities.	£	*s.*	*d.*	*Assets.*	£	*s.*	*d.*
To Debentures issued to Commonwealth Treasury	5,214,500	0	0	By capital value of fleet and spare gear, etc., less depreciation ..	4,395,976	12	5
Sundry creditors and credit balances ..	665,104	0	5	,, unexpired insurance premiums	50,341	19	9
Reserve accounts ..	242,252	16	1	,, insurance and protection claims pending ..	23,057	11	9
				,, Sundry debtors and debit balances, and works in progress ..	546,580	8	7
				,, Investments, cash at bank and in hand ..	173,353	18	7
				,, Realization of assets, account balance ..	104,217	14	10
				,, Profit and loss a/c— Balance— £ *s.* *d.* 31.3.24 239,545 11 5 31.3.25 588,782 19 2	828,328	10	7
	£6,121,856	16	6		£6,121,856	16	6

5. **Disposal of Vessels.**—The position in connexion with the disposal of surplus tonnage during the period 1st September, 1923, to 31st March, 1925, was as follows :—

	£	s.	d.
Capital value of 26 steamers sold	610,150	0	0
Sale price (less commissions, etc.)	648,180	0	0
Excess of sale price over book value	38,030	0	0
Expenses of lay-up, including interest and sale charges on vessels sold	52,233	12	8
Expenses of lay-up, including interest and depreciation on 17 vessels awaiting sale at 31st March, 1925	90,014	2	2
Total	142,247	14	10
Excess on sales as above	38,030	0	0
Deficiency	104,217	14	10

§ 8. World's Shipping Tonnage.

The table hereunder shows the number and gross tonnage of steam and motor, and of sailing vessels owned by the most important maritime countries, together with the proportion of the grand total owned by each country :—

WORLD'S SHIPPING TONNAGE, 1925-26.

Nationality.	Steam and Motor.		Sailing.		Total.		Percentage on Total.	
	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage.
Great Britain and Nthn. Ireland	8,161	19,304,670	398	136,041	8,559	19,440,711	26.52	31.35
Australia and New Zealand	634	826,987	22	9,971	656	836,958	2.03	1.35
Canada(*a*) ..	548	838,301	250	105,343	798	943,644	2.47	1.52
Other British ..	613	679,514	249	61,954	862	741,468	2.67	1.20
Total, British Empire ..	9,956	21,649,472	919	313,309	10,875	21,962,781	33.69	35.42
Belgium ..	237	538,193	3	4,390	240	542,583	0.74	0.88
Denmark ..	652	1,021,617	120	38,229	772	1,059,846	2.39	1.71
France ..	1,527	3,319,645	301	192,339	1,828	3,511,984	5.67	5.66
Germany ..	1,947	3,006,270	81	67,443	2,028	3,073,713	6.28	4.96
Greece ..	448	894,542	11	3,336	459	897,878	1.42	1.45
Holland ..	1,046	2,587,789	53	13,042	1,099	2,600,831	3.41	4.19
Italy	1,035	2,930,836	318	97,825	1,353	3,028,661	4.19	4.88
Japan ..	2,087	3,919,807	..	..	2,087	3,919,807	6.47	6.32
Norway ..	1,745	2,618,445	60	62,197	1,805	2,680,642	5.59	4.32
Spain ..	789	1,142,924	141	41,797	930	1,184,721	2.88	1.91
Sweden ..	1,203	1,253,900	186	47,226	1,389	1,301,126	4.30	2.10
United States of America(*b*) ..	3,421	11,995,490	936	1,017,070	4,357	13,012,560	13.50	20.98
Other Foreign Countries ..	2,500	2,966,155	555	273,793	3,055	3,239,948	9.47	5.22
Total, Foreign Countries ..	18,637	38,195,613	2,765	1,858,687	21,402	40,054,300	66.31	64.58
Grand Total ..	28,593	59,845,085	3,684	2,171,996	32,277	62,017,081	100.00	100.00

(*a*) Sea-going. (*b*) Including Philippine Islands.

The foregoing figures have been compiled from Lloyd's Register of Shipping, and vessels of 100 tons or upwards only have been included.

§ 9. Ferries.

1. **New South Wales.**—The ferry services in Port Jackson are under the control of two companies, which during the year 1925 had 71 vessels in commission, 68 of which were double-ended screw steamers, the remaining three being motor driven. It is claimed for the steamers that they are superior in size and equipment to boats employed on similar service in any other part of the world.

2. **Victoria.**—The Williamstown City Council owns one steamer which is engaged in the transport of passengers between Port Melbourne and Williamstown. There are several other steamers which are engaged during the summer season in the carriage of passengers and goods to the several seaside resorts. Particulars of these services, however, are not included in the table in sub-par. 6 following.

3. **Queensland.**—The Brisbane City Council and the Balmoral Shire Council control the ferry services in the Metropolitan area, but such ferries are really substitutes for bridges and have therefore not been included in the table hereunder.

4. **Western Australia.**—The ferries plying on the Swan River during 1925 were operated by a private company, and consisted of 8 petrol-driven vessels. At South Perth the Western Australian Government employed 4 vessels, 2 of which were steamers.

5. **Tasmania.**—In and around Hobart there were in 1925, 3 ferry services, 2 being controlled by a private company which had 6 steamers in commission, and 1 by the Public Works Department, with 2 motor-propelled vessels.

6. **Particulars of Working.**—The subjoined table shows for the year 1925, so far as returns are available, the most important items in connexion with the operation of the ferry services in the several States :—

FERRIES.—PARTICULARS OF WORKING, 1925.

Particulars.		New South Wales.	Victoria.	Western Australia.	Tasmania.	Total.
Boats in Service—						
Steam ..	No.	68	1	2	6	77
Other ..	No.	3	..	10	2	15
Total ..	No.	71	1	12	8	92
Number of passengers which boats are licensed to carry ..	No.	47,656	342	1,757	1,879	51,634
Revenue ..	£	721,477	7,001	14,707	18,887	762,072
Working Expenses	£	661,247	8,323	13,711	14,372	697,653
Passengers carried(*b*)	No.	44,072,000	245,000	1,080,000	1,248,009	46,645,009
Mileage of Boats	miles	(*a*)	21,600	80,937	59,240	(*c*) 161,777
Accidents—						
Killed ..	No.	3	..	..	..	3
Injured ..	No.	102	..	2	..	104
Employees—						
Salaried Staff	No.	47	..	2	7	56
Wages Staff	No.	1,104	6	23	30	1,163

(*a*) Not Available. (*b*) Approximate. (*c*) Incomplete.

7. **Other Services.**—In addition to the foregoing there are throughout the several States a number of row-boat ferry services, and on many of the principal inland rivers punts are in operation.

§ 10. Miscellaneous.

1. **Lighthouses.**—Transport and Communication Bulletin No 14, published by this Bureau, contains a list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power, and visibility of each light so far as particulars are available.

2. **Distances by Sea.**—A statement giving the distances by sea between the ports of the capital cities of Australia and the most important ports in other countries which trade with Australia was also included in Transport and Communication Bulletin No. 14.

3. **Shipping Freight Rates.**—The Quarterly Summary of Australian Statistics gives a list of the ruling freight rates for general merchandise both in respect of oversea and interstate shipments. The latest figures available, which give the rates current at

31st March, 1926, show that the rate for general merchandise from Australia to United Kingdom and Continent was 70s. per ton weight or measurement, as compared with 55s. per ton in 1915.

4. **Depth of Water at Main Ports.**—A table compiled from information supplied by the Director of Navigation showing the depth of water at the main ports of Australia at 1st January, 1926, has been included in the Transport and Communication Bulletin No. 17, published by this Bureau.

5. **Shipping Casualties.**—Courts of Marine Inquiry are constituted by a Magistrate, assisted by skilled assessors, and when necessary are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers found to be at fault. Particulars of shipping casualties reported on or near the coast during the year 1924–25 are shown in the Transport and Communication Bulletin No. 17. This information has also been furnished by the Director of Navigation.

6. **Commonwealth Navigation and Shipping Legislation.**—(i) *General.* An account, in some detail, of the Commonwealth Navigation and Shipping Legislation was published in Official Year Book No. 17 (pp. 1053–5), but considerations of space preclude its repetition in this present volume.

(ii) *Amending Acts.* Under the provisions of the Navigation Act 1925 (March, 1925), permission may be given to unlicensed British ships to engage in passenger tourist traffic between any specified Commonwealth ports. Certain vessels were granted permission to engage in the carriage of passengers between the port of Hobart and the ports of Brisbane, Sydney and Melbourne during the period 6th March, 1926, to 31st May, 1926. This permission may be renewed from time to time as occasion demands. The Navigation Act 1925 (July, 1925), confers authority for the suspension, for any specified time, of the operation of the provisions of that part of the principal Act relating to the engagement of ships in the coasting trade by exempting under certain circumstances any ship or class of ships from compliance with any specified provision or provisions of the Act.

B. RAILWAYS.

§ 1. General.

1. **Introduction.**—In the following pages statistics relating to State-owned lines are, in the main, dealt with separately from those under the control of the Commonwealth Government. The State railways are referred to throughout as "State" and the Commonwealth railways as "Federal" railways. A summary in regard to Federal and State railways will, however, be found in § 4 of this section.

2. **Improvement of Railway Statistics.**—Earlier issues of the Year Book contain a condensation of the report issued in 1909 by the Commonwealth Statistician to the Minister for Home Affairs on the subject of *The Desirability of Improved Statistics of Government Railways in Australia* (see Year Book No. 7, page 598).

Considerable improvement, both as regards the volume of information and the mode of presentation thereof in the statistical tables appearing in the reports of the several Railways Commissioners, has been made during recent years.

3. **Railway Communication in Australia.**—(i) *General.* An account of the progress of railway construction in Australia since the opening of the first line in 1854 will be found in Year Book No. 6, p. 681. In the eastern, south-eastern and southern parts of Australia there is now a network of railway lines converging from the various agricultural, pastoral and mining districts towards the principal ports, which are themselves connected by systems of lines running approximately parallel to the coast. In the east, lines radiating from Cairns, Townsville, Rockhampton, Brisbane and Sydney extend inland in various directions for distances ranging up to over 600 miles ; in the south-east there are numerous lines, those in Victoria converging towards Melbourne, while others in New South Wales have their terminus in Sydney ; in the south there are four main lines, with numerous branches, running from Melbourne ; while from Adelaide one main line, with several branches to the coastal towns, runs inland in a northerly direction for a distance of nearly 700 miles and another line runs in a south-easterly direction to various ports, meeting the main line from Melbourne on the border of South Australia and Victoria near Serviceton. The South Australian and Victorian railway systems also meet on the

border at two other points, one near Pinnaroo, and the other at Rennick, near Mount Gambier. In Western Australia there is a connected system of main or trunk lines between the ports of the State and the agricultural, pastoral, and mining districts, and two short lines, one on the north-west, the other on the south coast, which are unconnected with the main system. In the northern portion of Queensland there were also several disconnected lines running inland from the more important ports, but during the year 1924–25 an uninterrupted service as far north as Cairns was established. In Tasmania the principal towns are connected by a system of lines, and there are also, more especially in the western districts, several lines which have been constructed for the purpose of opening up mining districts.

By the opening, in 1917, of the Trans-Australian railway from Port Augusta to Kalgoorlie, through communication by rail was established between the eastern States and the Western Australian railway system.

(ii) *The Main Interstate Lines.* The main interstate lines, which permit of direct communication between the five capital cities—Brisbane, Sydney, Melbourne, Adelaide, and Perth—cover a distance from end to end of 3,474.80 miles or 3,479.82 miles via Newcastle. The schedule time for the journey from Brisbane to Perth is six days one hour forty-two minutes and from Perth to Brisbane five days twenty-one hours forty minutes, the time in each case being taken over all.

The longest railway journey which can be undertaken in Australia on one continouus line of railway is from Dajarra in Queensland to Meekatharra in Western Australia, total distance of 5,499.11 miles.

4. Non-conformity of Gauge.—(i) *General.* With but few exceptions, all the railway lines in Australia open for general traffic are now owned and managed by the respective States in whose territory they run, or by the Commonwealth Government; but, unfortunately, for the purpose of interstate traffic the construction of the various systems in different parts of Australia has proceeded without uniformity of gauge. A statement giving the reasons for the adoption of the various gauges in the several States appeared in Year Book No. 15, p. 534, but considerations of space preclude its repetition in the present issue.

(ii) *Interstate Junctions.* Connexions at border stations were established as follows:— Victoria and New South Wales, at Albury, 14th June, 1883; Victoria and South Australia, at Serviceton, 19th January, 1887; and New South Wales and Queensland, at Wallangarra, 16th January, 1888. Through trains were unable to run on this latter section until the completion of the Hawkesbury River Bridge on 1st May, 1889. On the 22nd October, 1917, through communication from east to west was made possible by the opening of the Trans-Australian line.

(iii) *Proposals for Unification.* The question of the unification of gauges in the several States has been under consideration for several years, and numerous conferences on the subject have been held from time to time between the several Railways Commissioners and between the Premiers of the States concerned. Reference to these conferences has been made in previous issues of the Year Book.

Some advancement, however, has been made in this connexion by the commencement of a 4 ft. 8½ in. gauge line between Kyogle (New South Wales) and South Brisbane (Queensland), which, when completed, will establish uninterrupted standard gauge communication between Sydney and South Brisbane. The mileage involved in this project is 87.12 miles, of which 60.56 miles is in Queensland Territory.

The construction of this line is under the control of a Council, consisting of the Commonwealth Railways Commissioner, the Chief Railway Commissioner for New South Wales, and the Commissioner for Railways, Queensland. The following further proposals for modifying the disadvantages attending the multiplicity of gauges have been recommended to Parliament by the Commonwealth Parliamentary Standing Committee on Public Works:—

(*a*) Extension of the Trans-Australian Railway from Port Augusta to Red Hill, 83 miles of 4 ft. 8½ in gauge; and

(*b*) Laying of a third rail from Red Hill to Adelaide to provide a railway of 4 ft. 8½ in. gauge over the existing 5 ft. 3 in. gauge line from Red Hill to Adelaide, a total distance of approximately 107 miles.

Should these proposals be accepted, through passengers over the Trans-Australian line will not need to change at Port Augusta and Terowie.

(iv) *Estimated Cost of Unification of Gauges.* The scheme advocated by the Royal Commission of 8th February, 1921, and adopted by the Prime Minister and Premiers of the several States in conference during November of the same year, as the first step will provide a standard 4 ft. 8½ in. gauge railway between Brisbane and Fremantle, and the conversion of the whole of the broad-gauge lines of Victoria and South Australia, at an estimated cost of £21,600,000, spread over a period of approximately eight years, The details of the estimate of £21,600,000, which provides for a main trunk line between Fremantle and Brisbane, and the conversion of the 5 ft. 3 in. gauge lines in Victoria and South Australia, together with the quota from each State and the Commonwealth Government in terms of the allocation of cost agreed upon, were given in a previous issue (see Year Book No. 16, p. 278).

The estimated cost of converting the whole of the lines in the States concerned was given as approximately £57,200,000.

5. **Rolling Stock Gauges.**—Allied to the question of the gauges of the railways of Australia is that of the rolling stock gauges in use, the rolling stock gauge being the maximum transverse dimensions to which the rolling stock may be constructed. Particulars in respect of such dimensions have been published in previous issues of this work. (See Official Year Book, No. 18, p. 274.)

6. **Mileage Open for Traffic, all Lines.**—(i) *General.* In all the States the principle that the control, construction, and maintenance of the railways should be in the hands of the Government has long been adhered to, excepting in cases presenting unusual circumstances. In various parts of Australia, lines have been constructed and managed by private companies, but at the present time nearly the whole of the railway traffic is in the hands of the State or Commonwealth Governments. A large proportion of the private lines has been laid down for the purpose of opening up forest lands, mining districts, or sugar areas, and these lines are not generally used for the conveyance of passengers or the public conveyance of goods. (See § 5 *Private Railways,* hereinafter.)

The subjoined table shows the mileage of Commonwealth Government, State Government, and private lines open for traffic (exclusive of sidings and cross-overs) in each State for each of the years 1920–21 to 1924–25. The railway mileage given for each State includes both Commonwealth and State Government railways in that State, and in this table and in those immediately following is estimated from the geographic point of view and not from that of ownership. The figures are to the end of the financial year ending on the 30th June, excepting the mileages for private lines, which are in most cases taken for the calendar year :—

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE OPEN, 1921 TO 1925.

State or Territory.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales ..	5,402.08	5,475.44	5,689.18	5,847.13	5,986.39
Victoria	4,337.35	4,374.73	4,393.48	4,496.34	4,542.45
Queensland	7,012.62	7,063.89	7,180.10	7,341.83	7,433.46
South Australia	3,463.35	3,487.37	3,503.40	3,577.01	3,577.01
Western Australia ..	4,905.83	4,867.48	4,844.93	4,908.77	5,040.65
Tasmania	877.01	872.49	896.36	908.38	904.08
Federal Capital Territory ..	4.94	4.94	4.94	4.94	4.94
Northern Territory ..	198.68	198.68	198.68	198.68	198.68
Australia	26,201.86	26,345.02	26,711.07	27,283.08	27,687.66

In previous issues of the Year Book particulars were given for different periods from 1855 onwards. (See No. 15, p. 537.)

(ii) *Government and Private Lines Separately.* The next table shows for each State (*a*) the length of lines owned by the State Government, and by the Commonwealth Government in that State, all of which lines are open for general use by the public, (*b*) the length of private lines available for general use by the public, and (*c*) the length of the private lines not so available. The mileages specified in the case of Government lines are to the 30th June, 1925; those given for private lines are to the same date, with the exception of Western Australia, which are to 31st December, 1925:—

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE CLASSIFIED, 1924-25.

State or Territory.	Government Lines— State.	Government Lines— Federal.	Private Lines available for General Traffic.	Total Open for General Traffic.	Private Lines used for special Purposes only.	Grand Total.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales	5,655.75	..	143.90	5,799.65	186.74	5,986.39
Victoria ..	4,483.62	..	24.94	4,508.56	33.89	4,542.45
Queensland ..	6,114.42	..	289.97	6,404.39	1,029.07	7,433.46
South Australia ..	2,451.70	1,075.41	33.80	3,560.91	16.10	3,577.01
Western Australia	3,732.66	453.99	277.00	4,463.65	577.00	5,040.65
Tasmania ..	672.90	..	191.66	864.56	39.52	904.08
Federal Capital Territory ..	..	4.94	..	4.94	..	4.94
Northern Territory	..	198.68	..	198.68	..	198.68
Australia ..	23,111.05	1,733.02	961.27	25,805.34	1,882.32	27,687.66

7. **Comparative Railway Facilities.**—The relations to population and area respectively of the mileage of line open to the public for general traffic (including both Government and private lines) on the 30th June, 1925, are shown in the subjoined statement:—

RAILWAYS.—GOVERNMENT AND PRIVATE.—COMPARISON OF FACILITIES, 1925.

Particulars.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	Fed. Cap. Ter.	Nor. Ter.	Aust.
Mileage of Railway—									
Per 1,000 of population ..	2.55	2.70	7.49	6.56	12.13	4.08	1.11	52.73	4.35
Per 100 sq. miles or Territory ..	18.74	51.30	9.55	9.37	4.57	32.98	5.26	0.38	8.67

8. **Classification of Lines according to Gauge, 1924-25.**—The next table gives a classification, according to gauge, of the total mileage, exclusive of sidings and crossovers, of (i) Commonwealth Government railways, given in the State or Territory in which situated; (ii) State Government railways; (iii) Private railways open to the public for general traffic; and (iv) Private lines open for special purposes. Particulars of Government railways are up to the 30th June, 1925; of private railways open for general traffic, to the 31st December, 1925, as nearly as possible; and of private railways open for special purposes to the 30th June, 1925, with the exception of Western Australia, the figures for which State are to the 31st December, 1925.

RAILWAYS.—GOVERNMENT AND PRIVATE.—GAUGES, 1924-25.

State or Territory in which situated.	Route mileage having a gauge of—								Total.
	5 ft. 3 in.	4 ft. 8½ in.	3 ft. 6 in.	3 ft. 0 in.	2 ft. 6 in.	2 ft. 3 in.	2 ft. 0 in.	1 ft. 8 in.	
FEDERAL RAILWAYS.									
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
South Australia ..	..	597.46	477.95	..	..	..	..	..	1,075.41
Western Australia ..	..	453.99	..	..	..	..	..	..	453.99
Federal Capital Territory	..	4.94	..	..	..	..	..	..	4.94
Northern Territory	..	..	198.68	..	..	..	..	..	198.68
Total ..	..	1,056.39	676.63	..	..	..	..	..	1,733.02
STATE RAILWAYS.									
New South Wales ..	..	5,616.24	39.51	..	..	..	..	..	5,655.75
Victoria	4,361.85	..	..	..	121.77	..	..	..	4,483.62
Queensland ..	..	..	6,084.16	..	..	..	30.26	..	6,114.42
South Australia ..	1,190.46	..	1,261.24	..	..	..	..	..	2,451.70
Western Australia ..	..	..	3,732.66	..	..	..	..	..	3,732.66
Tasmania	..	..	648.07	..	..	..	24.83	..	672.90
Total ..	5,552.31	5,616.24	11,765.64	..	121.77	..	55.09	..	23,111.06
PRIVATE RAILWAYS OPEN FOR GENERAL TRAFFIC.									
New South Wales ..	..	80.90	36.67	..	..	..	26.33	..	143.90
Victoria	13.94	..	..	11.00	..	..	..	..	24.94
Queensland ..	..	..	119.72	..	7.00	..	163.25	..	289.97
South Australia ..	..	..	33.80	..	..	..	..	..	33.80
Western Australia ..	..	..	277.00	..	..	..	..	..	277.00
Tasmania	..	..	175.17	..	..	..	16.49	..	191.66
Total ..	13.94	80.90	642.36	11.00	7.00	..	206.07	..	961.27
PRIVATE RAILWAYS OPEN FOR SPECIAL PURPOSES.									
New South Wales ..	..	173.06	3.50	..	..	..	10.18	..	186.74
Victoria	16.79	..	..	4.50	..	..	12.60	..	33.89
Queensland ..	..	..	253.80	..	205.50	..	569.77	..	1,029.07
South Australia ..	..	..	..	..	2.00	3.75	10.35	..	16.10
Western Australia ..	..	..	528.00	..	2.00	..	14.00	33.00	577.00
Tasmania	..	..	22 32	..	..	..	17.20	..	39.52
Total ..	16.79	173.06	807.62	4.50	209.50	3.75	634.10	33.00	1,882.32
ALL RAILWAYS.									
New South Wales ..	..	5,870.20	79.68	..	..	..	36.51	..	5,986.39
Victoria	4,392.58	..	..	15.50	121.77	..	12.60	..	4,542.45
Queensland ..	..	..	6,457.68	..	212.50	..	763.28	..	7,433.46
South Australia ..	1,190.46	597.46	1,772.99	..	2.00	3.75	10.35	..	3,577.01
Western Australia ..	..	453.99	4,537.66	..	2.00	..	14.00	33.00	5,040.65
Tasmania	..	..	845.56	..	..	..	58.52	..	904.08
Federal Capital Territory	..	4·94	..	..	..	..	..	..	4·94
Northern Territory	..	..	198.68	..	..	..	..	..	198·68
GRAND TOTAL	5,583.04	6,926.59	13,892.25	15.50	338.27	3.75	895.26	33.00	27,687.66

§ 2. Federal Railways.

1. **General.**—On the 1st January, 1911, the Commonwealth Government took over the Northern Territory from the South Australian Government, and at the same time the railways from Darwin to Pine Creek in the Northern Territory, and from Port Augusta to Oodnadatta in South Australia, came under its control. Subsequently the construction of a transcontinental line from Port Augusta in South Australia to Kalgoorlie in Western Australia was undertaken by the Commonwealth Government, while a line has been constructed in the Federal Capital Territory, connecting Canberra with the New South Wales railway system at Queanbeyan. In 1917 an Act was passed by which all the Federal railways were vested in a Commonwealth Railways Commissioner.

2. **Northern Territory Railway.**—(i) *Darwin to Katherine.* On the 1st January, 1911, the line from Darwin to Pine Creek came under the jurisdiction of the then Department of External Affairs, and was worked under the Administrator of the Northern Territory. As mentioned above, the management of this railway is now vested in the Commonwealth Railways Commissioner.

In the Northern Territory Acceptance Act the construction of a transcontinental line from South Australia is provided for. The extension of the line from Pine Creek to Katherine River was completed, and the first train ran through to Emungalan (Katherine River) on 13th May, 1917.

(ii) *Proposed Extension.* The recommendations of the Parliamentary Standing Committee on Public Works in connexion with the North-South line were indicated in the last issue of this work. (See Year Book No. 18, p. 278.)

(iii) *Line Authorized for Construction.* The Northern Territory Railway Extension Act 1923 provides for the construction of a 3 ft. 6 in. gauge line from the present terminus at Emungalan to Daly Waters, a distance of approximately 160 miles. The estimated cost of this line is £1,545,000, which includes the cost of a bridge over the Katherine River estimated at £95,000. Approximately 99 miles of this extension have been permanently surveyed, and a commencement has been made with the actual construction work.

3. **Port Augusta to Oodnadatta Railway.**—This line was taken over by the Commonwealth Government from 1st January, 1911, but was held under lease by the South Australian Government until 31st December, 1913. From the 1st January, 1914, the line was worked under agreement by the South Australian Government for and on behalf of the Commonwealth, but from 1st January, 1926, the management devolved upon the Commonwealth Railways Commissioner. It was provided in the Northern Territory Acceptance Act that the Commonwealth should annually reimburse the State with the interest payable on the amount of loans raised by the State for the purpose of constructing the railway, and the agreement for working the line prescribed that the Commonwealth should be responsible to the State for any financial loss incurred by the State in the working and management of the railway, but should be entitled to receive from the State any profit made in such working and management.

4. **Federal Capital Territory Railway—Queanbeyan-Canberra.**—This line was built by the Railway Construction Branch of the Public Works Department, New South Wales, and was completed and taken over by the Chief Commissioner of Railways for that State, who has since worked the line for and on behalf of the Commonwealth Government. The line was opened for departmental goods traffic on 25th May, 1914. It connects with the New South Wales railway system at Queanbeyan, is 4.94 miles in length, and has sidings of an aggregate length of 2.00 miles.

5. **Trans-Australian Railway (Kalgoorlie to Port Augusta).**—In the issue of the Year Book for 1918 (No. 11, pp. 663 to 666 and p. 1213), a short history of the construction of the Trans-Australian line is given, also a description of the country through which the line passes between Kalgoorlie and Port Augusta.

On the 22nd October, 1917, the first through train left Port Augusta with an official party on board for Kalgoorlie. It should be mentioned that owing to deviations from the original route, the length of this line was reduced from 1,063.39 miles to 1,051.45 miles, a saving of 11.94 miles.

6. **Lines Open, Surveyed, etc.**—The following table shows the lines open for traffic under the control of the Commonwealth Government at 30th June, 1925, together with the lines which have been or are being surveyed :—

RAILWAYS, FEDERAL, 30th JUNE, 1925.

Terminals.	Miles.
OPEN FOR TRAFFIC.	
Trans-Australian—Port Augusta (South Australia) to Kalgoorlie (Western Australia)	1,051.45
Port Augusta to Oodnadatta (South Australia)	477.95
Queanbeyan to Canberra (Federal Capital Territory)	4.94
Northern Territory Railway—Darwin to Emungalan, Katherine River ..	198.68
Total opened for traffic	1,733.02
SURVEYED OR BEING SURVEYED.	
Katherine River to Mataranka (Northern Territory)	65.44
Mataranka to Daly Waters (Northern Territory)	95.00
Kingoonya to Boorthanna (South Australia)	176.44
Canberra to Jervis Bay (Federal Capital Territory)	140.22
Canberra (Federal Capital Territory) to Federal Capital Territory Border in the direction of Yass (New South Wales)	11.67
Daly Waters (Northern Territory) to Oodnadatta (South Australia) ..	851.50
Port Augusta to Crystal Brook (South Australia)	69.25
Total surveyed or being surveyed	1,409.52

In addition, a trial survey from the proposed deep water port at Rocky Island (Gulf of Carpentaria) to Borroloola has been completed in connexion with the possibility of developing a port at the mouth of the McArthur River.

7. **Mileage open, worked, and Train miles run.**—The next table shows the length of the Federal railways open for traffic, average miles worked, and the train miles run in the years 1921 to 1925 :—

RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES, 1921 TO 1925.

MILES OPEN FOR TRAFFIC.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
	Miles.	Miles.	Miles.	Miles.	Miles.
1921	1,051	478	5	199	1,733
1922	1,051	478	5	199	1,733
1923	1,051	478	5	199	1,733
1924	1,051	478	5	199	1,733
1925	1,051	478	5	199	1,733

RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES, 1921 TO 1925—*continued.*

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
AVERAGE MILES WORKED.					
	Miles.	Miles.	Miles.	Miles.	Miles.
1921	1,051	478	5	199	1,733
1922	1,051	478	5	199	1,733
1923	1,051	478	5	199	1,733
1924	1,051	478	5	199	1,733
1925	1,051	478	5	199	1,733
TRAIN MILES RUN.					
1921	472,290	320,292	1,058	17,270	810,910
1922	471,061	242,751	1,263	16,078	731,153
1923	449,609	303,187	1,065	20,823	774,684
1924	453,742	293,529	4,731	18,412	770,414
1925	472,646	289,643	6,247	51,345	819,881

8. **Cost of Construction and Equipment.**—In the following table particulars are given of the cost of construction and equipment for traffic of the undermentioned railways for each of the years 1921 to 1925 :—

RAILWAYS, FEDERAL.—CAPITAL COST, 1921 TO 1925.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Oodnadatta. (*a*)	Federal Capital Territory. (*b*)	Northern Territory.	
TOTAL COST OF CONSTRUCTION AND EQUIPMENT OF LINES OPEN.					
	£	£	£	£	£
1921	7,137,365	2,287,193	48,144	1,711,585	11,184,287
1922	7,213,923	2,296,139	48,144	1,718,021	11,276,227
1923	7,301,433	2,309,136	48,144	1,725,666	11,384,379
1924	7,379,785	2,342,490	50,720	1,726,877	11,499,872
1925	7,435,771	2,554,068	50,720	1,727,412	11,767,971
COST PER MILE OPEN.					
1921	6,788	4,785	9,746	8,615	6,454
1922	6,861	4,804	9,746	8,647	6,507
1923	6,944	4,831	9,746	8,686	6,569
1924	7,019	4,901	10,267	8,692	6,636
1925	7,072	5,345	10,267	8,694	6,790

(*a*) Exclusive of Rolling Stock the property of South Australian Government Railways.
(*b*) Exclusive of Rolling Stock the property of New South Wales Government Railways.

The sum of £1,479,943, of which £85,452 was for surveys, etc., has been provided from revenue for capital purposes to 30th June, 1925, and has been included in the total shown above.

9. **Gross Revenue.**—(i) *Total, per average mile worked, and per train mile run.* The following table shows the total revenue from all sources, the revenue per average mile worked, and the revenue per train mile run for each of the undermentioned railways for the financial years 1921 to 1925 inclusive :—

RAILWAYS, FEDERAL.—GROSS REVENUE, TOTAL, ETC., 1921 TO 1925.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
	TOTAL GROSS REVENUE.				
	£	£	£	£	£
1921	206,871	112,091	1,240	12,214	332,416
1922	206,826	99,462	1,847	14,364	322,499
1923	208,925	108,770	2,883	15,835	336,413
1924	227,420	105,124	4,080	16,802	353,426
1925	256,647	110,256	7,029	35,180	409,112
	GROSS REVENUE PER AVERAGE MILE WORKED.				
1921	197	235	251	62	192
1922	197	208	374	72	186
1923	199	228	584	80	194
1924	216	220	826	85	204
1925	244	231	1,423	177	236
	GROSS REVENUE PER TRAIN-MILE RUN.				
	d.	d.	d.	d.	d.
1921	105.12	83.99	281.29	169.74	98.38
1922	105.37	98.34	350.97	214.41	105.86
1923	111.52	86.10	649.69	182.51	104.22
1924	120.29	87.96	220.04	219.01	111.16
1925	130.37	93.25	281.20	164.65	120.69

The increased revenue was principally derived from the carriage of live stock over the Northern Territory Railway consequent on the re-opening of the Darwin Meat Works and increased passenger and goods traffic on the Trans-Australian and Federal Capital Territory lines.

(ii) *Classification and Percentages.* The gross revenue is composed of (*a*) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (*b*) receipts from the carriage of goods and live stock; and (*c*) rents and miscellaneous items. The subjoined table shows the gross revenue for 1921 to 1925 classified according to the three chief sources of receipts, together with their percentages on the total revenue. The respective totals of the three items are given in the preceding table.

RAILWAYS, FEDERAL.—RECEIPTS, VARIOUS SOURCES, 1921 TO 1925.

Year ended 30th June—	Railway.									
	Trans-Australian.		Oodnadatta.		Federal Capital Territory.		Northern Territory.		Total.	
	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.
	COACHING TRAFFIC RECEIPTS.									
	£	%	£	%	£	%	£	%	£	%
1921 ..	128,953	62.34	18,589	16.58	20	1.61	2,700	22.11	150,262	45.20
1922 ..	139,192	67.30	19,669	19.78	48	2.60	2,685	18.69	161,594	50.11
1923 ..	138,304	66.20	17,927	16.48	47	1.63	397	2.51	156,675	46.57
1924 ..	144,352	63.48	17,764	16.90	754	18.48	2,778	16.53	165,648	46.87
1925 ..	157,173	61.24	18,732	16.99	2,228	31.70	3,367	9.57	181,500	44.36
	GOODS AND LIVE STOCK RECEIPTS.									
1921 ..	39,750	19.21	90,802	81.01	1,210	97.58	4,859	39.78	136,621	41.10
1922 ..	31,081	15.03	76,710	77.12	1,779	96.32	5,194	36.16	114,764	35.58
1923 ..	31,005	14.84	87,552	80.49	2,819	97.78	7,163	45.23	128,539	38.21
1924 ..	34.486	15.16	84,278	80.17	3,326	81.52	6,141	36.55	128,231	36.29
1925 ..	53,313	20.77	88,544	80.31	4,801	68.30	19,359	55.03	166,017	40.58
	MISCELLANEOUS RECEIPTS.									
1921 ..	38,168	18.45	2,700	2.41	10	0.81	4,655	38.11	45,533	13.70
1922 ..	36,553	17.67	3,083	3.10	20	1.08	6,485	45.15	46,141	14.31
1923 ..	39,616	18.96	3,291	3.03	17	0.59	8,275	52.26	51,199	15.22
1924 ..	48,582	21.36	3,082	2.93	..	..	7,883	46.92	59,547	16.84
1925 ..	46,161	17.99	2,980	2.70	..	..	12,454	35.40	61,595	15.06

The miscellaneous receipts for the year 1924–25 include an amount of £25,162, revenue from dining cars and refreshment services on the Trans-Australian Railway. A sum of £23,894 was received from this source during the previous year.

10. **Working Expenses.**—(i) *Total.* The following table shows the total working expenses, and the percentages on the corresponding gross revenues of each railway for each year from 1921 to 1925.

Details of the annual expenditure on (*a*) maintenance of ways, works and buildings, (*b*) locomotives, carriages and wagons repairs and renewals, (*c*) traffic expenses, and (*d*) compensation, general and miscellaneous charges, are given in (iii) following.

RAILWAYS, FEDERAL.—WORKING EXPENSES, TOTAL, ETC., 1921 TO 1925.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
	TOTAL WORKING EXPENSES.				
	£	£	£	£	£
1921	298,209	172,552	655	27,551	498,967
1922	255,434	177,369	1,308	26,511	460,622
1923	250,280	178,181	1,588	30,984	461,033
1924	265,121	176,711	3,268	30,077	475,177
1925	294,163	158,009	4,882	40,016	497,070
	PERCENTAGE OF WORKING EXPENSES ON REVENUE.				
	%	%	%	%	%
1921	144.15	153.94	52.82	225.57	150.10
1922	123.50	178.33	70.82	184.56	142.83
1923	119.79	163.81	55.08	195.67	137.04
1924	116.58	168.10	80.10	179.01	134.45
1925	114.61	143.31	69.45	113.75	121.50

While the working expenses in 1924–25 were lower than in 1920–21, the increases during the past few years are ascribed to increased salaries consequent on Arbitration Court awards and the increased cost of material generally.

(ii) *Averages.* The next table gives the working expenses per average mile worked and per train-mile run for each railway for the years 1921 to 1925 :—

RAILWAYS, FEDERAL.—WORKING EXPENSES, AVERAGES, 1921 TO 1925.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
	WORKING EXPENSES PER AVERAGE MILE WORKED.				
	£	£	£	£	£
1921	284	361	133	139	288
1922	243	371	265	133	266
1923	238	373	322	156	266
1924	252	370	662	151	274
1925	280	331	988	204	287
	WORKING EXPENSES PER TRAIN-MILE RUN.				
	d.	*d.*	*d.*	*d.*	*d.*
1921	151.54	129.30	148.59	382.87	147.67
1922	130.14	175.36	248.55	395.73	151.20
1923	133.60	141.04	357.85	357.11	142.83
1924	140.35	147.86	176.25	392.05	149.45
1925	149.43	133.64	195.31	187.29	146.64

(iii) *Classification and Percentages.* The subjoined table shows the distribution of working expenses among four chief heads of expenditure for the years 1921 to 1925, together with their percentages on the total working expenses which are given in 10 (i) hereinbefore :—

RAILWAYS, FEDERAL.—DISTRIBUTION OF WORKING EXPENSES, 1921 TO 1925.

Year ended 30th June—	Railway.								Total.	
	Trans-Australian.		Oodnadatta.		Federal Capital Territory.		Northern Territory.			
	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.
	MAINTENANCE.									
	£	%	£	%	£	%	£	%	£	%
1921 ..	99,559	33.38	57,920	33.57	254	38.78	13,236	48.04	170,969	34.27
1922 ..	75,941	29.73	78,780	44.42	736	56.27	14,683	55.38	170,140	36.94
1923 ..	72,822	29.10	83,014	46.59	810	51.01	16,350	52.77	172,996	37.52
1924 ..	77,892	29.38	71,087	40.23	711	21.76	13,858	46.08	163,548	34.42
1925 ..	83,809	28.49	57,411	36.33	906	18.56	14,470	36.16	156,596	31.50
	LOCOMOTIVE, CARRIAGE, AND WAGON CHARGES.									
1921 ..	128,680	43.15	94,381	54.70	340	51.91	9,269	33.64	232,670	46.63
1922 ..	112,317	43.97	79,640	44.90	508	38.84	4,848	18.29	197,313	42.84
1923 ..	110,652	44.21	73,476	41.24	721	45.40	7,528	24.30	192,377	41.73
1924 ..	115,107	43.42	84,029	47.55	1,900	58.14	8,179	27.19	209,215	44.03
1925 ..	134,924	45.87	77,809	49.24	2,756	56.45	13,303	33.24	228,792	46.03
	TRAFFIC EXPENSES.									
1921 ..	41,294	13.85	17,656	10.23	61	9.31	4,129	14.99	63,140	12.60
1922 ..	38,416	15.04	16,609	9.36	64	4.89	6,248	23.57	61,337	13.31
1923 ...	37,139	14.84	18,589	10.43	57	3.59	6,481	20.92	62,266	13.51
1924 ..	39,936	15.06	18,533	10.49	657	20.10	7,346	24.42	66,472	13.99
1925 ..	41,540	14.12	19,316	12.23	1,220	24.99	11,271	28.17	73,347	14.76
	OTHER CHARGES.									
1921 ..	28,676	9.62	2,595	1.50	..	..	917	3.33	32,188	6.45
1922 ..	28,760	11.26	2,340	1.32	..	..	732	2.76	31,832	6.91
1923 ..	29,667	11.85	3,102	1.74	..	..	625	2.01	33,394	7.24
1924 ..	32,186	12.14	3,062	1.73	..	..	694	2.31	35,942	7.56
1925 ..	33,890	11.52	3,473	2.20	..	..	972	2.43	38,335	7.71

11. Passenger Journeys, and Tonnage of Goods and Live Stock.—(i) *General.* In the next table particulars are given of the passenger journeys and tonnage of goods and live stock carried on the Federal railways during the years 1921 to 1925 :—

RAILWAYS, FEDERAL.—TRAFFIC, 1921 TO 1925.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
	PASSENGER JOURNEYS.				
	No.	No.	No.	No.	No.
1921	29,686	69,407	..	3,704	102,797
1922	28,003	64,477	..	3,343	95,823
1923	32,914	67,311	..	3,063	103,288
1924	31,805	67,657	32,616	3,511	135,589
1925	32,362	65,322	110,499	3,798	211,981
	TONNAGE OF GOODS AND LIVE STOCK CARRIED.				
	tons.	tons.	tons.	tons.	tons.
1921	20,089	87,879	6,913	3,610	118,491
1922	20,780	76,089	9,817	2,251	108,937
1923	33,252	72,392	14,702	2,954	123,300
1924	32,858	69,179	18,504	3,167	123,708
1925	42,225	63,622	25,405	15,259	146,511

(ii) *Passenger Mileage Summary.* The appended table gives particulars of "Passenger-Mileage" on each of the Federal railways for the year 1924–25 :—

RAILWAYS, FEDERAL.—PASSENGER-MILES SUMMARY, 1924-25.

Railway.	Passenger Train Mileage.	Number of Passenger Journeys.	Total "Passenger-Miles."	Amount Received from Passengers.	Average Number of Passengers carried per Train Mile.	Average Mileage per Passenger Journey.	Average Earnings per "Passenger-Mile."	Average Fare per Passenger Journey.			Density of Traffic per Average Mile Worked.
			,000 omitted.	£		Miles.	*d.*	£	*s.*	*d.*	
Trans-Australian ..	367,419	32,362	26,845	126,831	173	830	1.13	3	18	5	25,531
Oodnadatta ..	51,059	65,322	2,583	14,454	51	40	1.34	0	4	5	5,404
Federal Capital Territory	1,955	110,499	409	1,995	209	4	1.17	0	0	4	82,916
Northern Territory ..	10,902	3,798	361	2,993	33	95	1.99	0	15	9	1,817

(iii) *Ton-Mileage Summary.* Particulars of ton-mileage are shown hereunder in respect of each of the Federal railways for the year 1924–25 :—

RAILWAYS, FEDERAL.—"TON-MILEAGE" SUMMARY, 1924-25.

Railway.	Goods Train Mileage.	Total Tons Carried.	Total "Ton-Miles."	Goods Earnings.	Average Freight-paying Load per Train Mile.	Average Haul per ton.	Earnings per "Ton-Mile."	Density of Traffic per Average Mile Worked.
			,000 omitted.	£	Tons.	Miles.	*d.*	
Trans-Australian ..	105,040	42,225	10,132	53,313	96	240	1.26	9,636
Oodnadatta ..	232,703	63,622	9,453	88,544	41	149	2.25	19,777
Federal Capital Territory	4,044	25,405	127	4,801	41	5	9.10	25,648
Northern Territory	40,377	15,259	1,516	19,359	38	99	3.06	7,632

12. **Passenger Fares, Goods Rates, and Parcel Rates.**—In previous issues of the Year Book particulars were included of Passenger Fares, Goods Rates (Ordinary Goods and Agricultural Produce), and Parcels Rates, but it is not proposed to republish this information unless the rates previously prescribed are substantially amended.

13. **Rolling Stock, 1925.**—The following table shows the numbers of locomotives and rolling stock in use on the Federal railways, classified according to gauge :—

RAILWAYS, FEDERAL.—LOCOMOTIVES AND ROLLING STOCK, 1925.

Railway.	Gauge.		Total.	Gauge.		Total.	Gauge.		Total.
	4 ft. 8½ in.	3 ft. 6 in.		4 ft. 8½ in.	3 ft. 6 in.		4 ft. 8½ in.	3 ft. 6 in.	
	LOCOMOTIVES.			COACHING STOCK.			STOCK OTHER THAN COACHING.		
Trans-Australian	68	1	69	49	..	49	735	..	735
Northern Territory ..	..	13	13	..	12	12	..	282	282
Total ..	68	14	82	49	12	61	735	282	1,017

The Oodnadatta and Federal Capital Territory Railways are worked by the South Australian and New South Wales Government Railways Departments respectively, which use their own rolling stock. During the year 31 vehicles (other than coaching), of 3 ft. 6 in.

gauge, were transferred from the Trans-Australian Line to the Oodnadatta Line in anticipation of the Commonwealth Railways Commissioner assuming the responsibility for the operation of the latter line as from 1st January, 1926.

14. **Employees.**—The following table shows the number of employees on the Federal railways at 30th June in each year from 1921 to 1925 inclusive, classified according to salaried and wages staffs :—

RAILWAYS, FEDERAL.—EMPLOYEES, 1921 TO 1925.

Railway.	30th June—									
	1921.		1922.		1923.		1924.		1925.	
	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Trans-Australian	172	961	161	802	157	852	162	761	173	906
Oodnadatta (*a*) ..	..	..	..	..	..	..	..	..	..	..
Federal Capital Territory (*b*) ..	..	..	..	..	..	..	..	..	..	..
Northern Territory	7	60	8	54	9	71	14	107	17	147
Total ..	179	1,021	169	856	166	923	176	868	190	1,053

(*a*) Worked by South Australian Government Railways.
(*b*) Worked by New South Wales Government Railways.

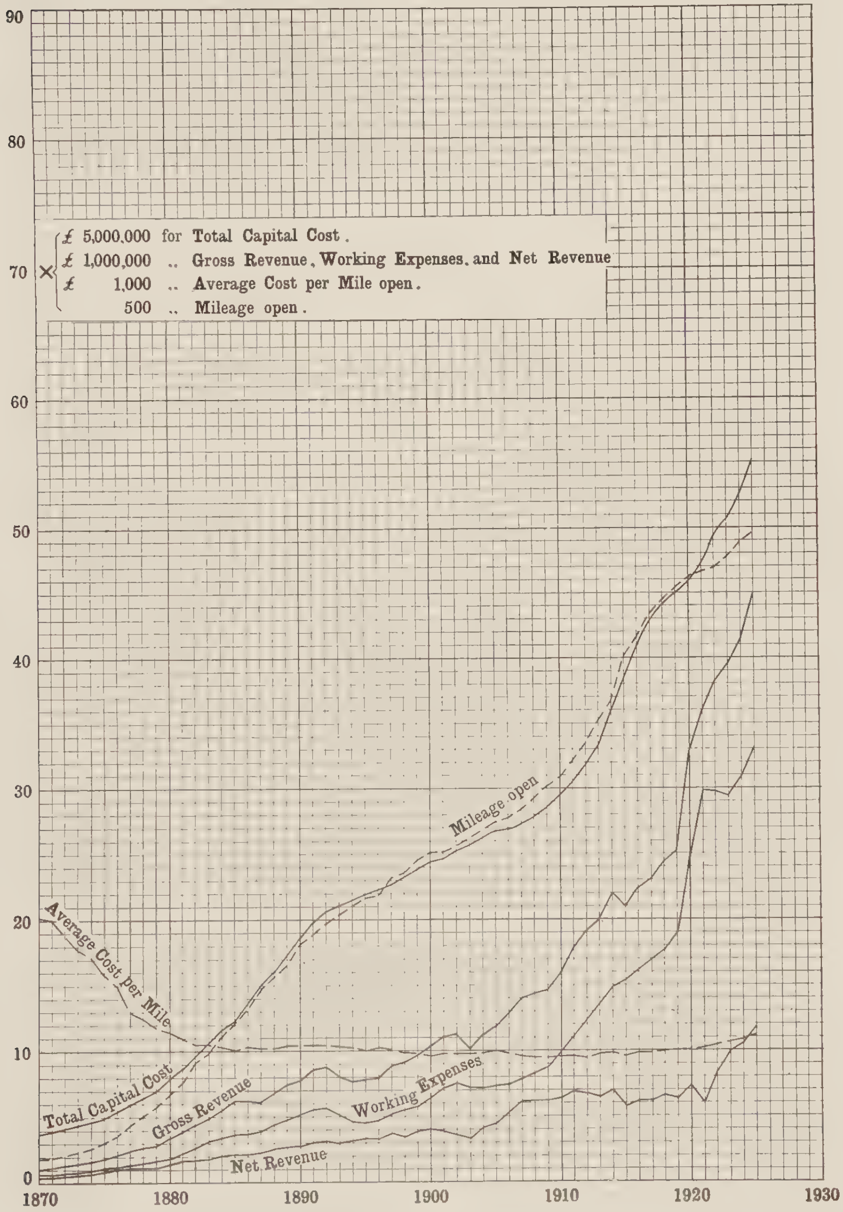
Of the 173 salaried staff employed on the Trans-Australian Railway, 43 were engaged in the Construction Branch, and 56 of the wages staff of the Northern Territory Railway were similarly employed at the 30th June, 1925.

15. **Accidents.**—(i) *Classification.* The table hereunder furnishes a classification of accidents on the Federal railways during the year 1924–25 :—

RAILWAYS, FEDERAL.—ACCIDENTS, 1924-25.

Classification.	Trans-Australian.		Oodnadatta.		Federal Capital Territory.		Northern Territory.		All Railways.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Train Accidents—										
Passengers	..	..	..	..	..	..	..	..	..	..
Employees	..	..	2	2	..	..	..	3	2	5
Accidents on line (other than train accidents)—										
Passengers	..	1	..	..	..	..	..	..	..	1
Employees	..	3	..	1	..	..	..	1	..	5
Other Persons	..	..	..	..	..	..	..	..	..	..
Shunting Accidents—										
Passengers	..	..	..	..	..	..	..	..	..	..
Employees	..	2	..	..	..	..	..	..	..	2
Other Persons	..	..	..	..	..	..	..	..	..	..
Employees proceeding to or from duty within the Railway boundary	..	..	..	..	..	..	..	..	..	..
Persons killed or injured at crossings	..	..	..	..	..	..	..	..	..	..
Trespassers	..	..	..	..	..	..	..	..	..	..
Miscellaneous	..	..	..	..	..	..	..	..	..	..
Total	..	6	2	3	..	..	..	4	2	13

FINANCIAL POSITION OF THE GOVERNMENT RAILWAYS OF AUSTRALIA, 1870 TO 1925.



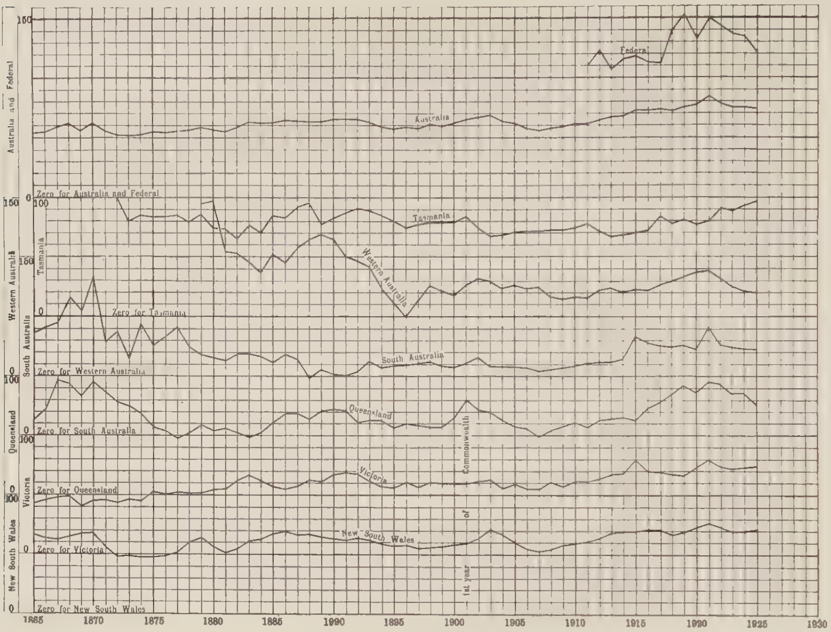
(See page 286.)

EXPLANATION.—The base of each small square represents throughout one year. The significance of the vertical height of each square varies according to the nature of the several curves.

In the curve for the total capital cost, the vertical side of each square represents £5,000,000.

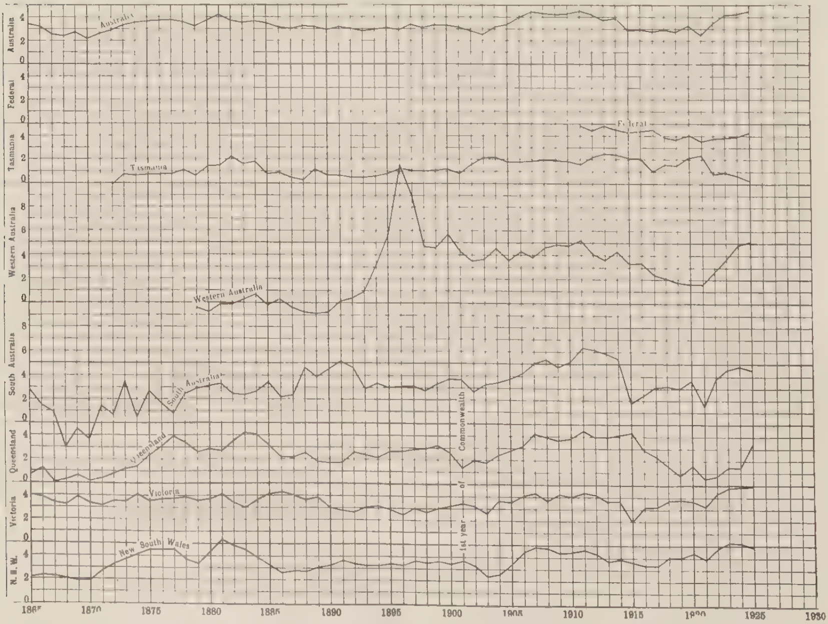
In the curves for (i) gross revenue, (ii) working expenses, and (iii) net revenue, the vertical side of each small square represents £1,000,000. For the curve of average cost per mile open, the vertical side of each small square represents £1,000. The mileage open is shown by a dotted curve, the vertical side of each small square representing 500 miles.

PERCENTAGES OF WORKING EXPENSES ON GROSS REVENUE OF GOVERNMENT RAILWAYS, 1865 TO 1925.



Explanation.—The base of each small square represents throughout one year. The vertical side of a small square denotes throughout 10 per cent., the heavy zero lines being different for each State and Australia, with, however, two exceptions, the zero lines for South Australia and Western Australia being identical, as is also the case with the zero line for Australia and Federal.

PERCENTAGES OF NET REVENUE ON CAPITAL COST OF GOVERNMENT RAILWAYS, 1865 TO 1925.



Explanation.—The base of each small square represents throughout one year. The vertical side of a small square denotes 1 per cent., the thick zero lines, however, for each State and Australia being different, but the zero line for Federal is the same as that for Australia.

Where the curve for any State falls below that State's zero line, loss is indicated, the working expenses having exceeded the gross revenue.

(ii) *Particulars for Quinquennium* 1921–25. The following table shows the number of accidents in each of the years 1921 to 1925 :—

RAILWAYS, FEDERAL.—ACCIDENTS, 1921 TO 1925.

Railway.	Number of Persons.									
	Killed.					Injured.				
	1921.	1922.	1923.	1924.	1925.	1921.	1922.	1923.	1924.	1925.
Trans-Australian	..	..	1	1	..	3	8	14	9	6
Oodnadatta ..	..	..	..	..	2	6	8	7	7	3
Federal Capital Territory ..	..	..	..	..	..	..	..	..	..	..
Northern Territory	3	..	..	1	..	1	1	1	1	4
Total ..	3	..	1	2	2	10	17	22	17	13

§ 3. State Railways.

1. **Administration and Control of State Railways.**—The policy of Government control of the railways has been adopted in each State, and earlier issues of the Year Book (see No. 6, p. 693) contain a description of the methods adopted by the various State Governments in the control and management of their railways.

2. **Mileage Open, 1921 TO 1925.**—(i) *General.* The following table shows the length of State railways open for traffic on the 30th June in the years 1921 to 1925 :—

RAILWAYS, STATE.—MILEAGE OPEN FOR TRAFFIC, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1921	5,043	4,267	5,752	2,333	3,538	630	21,563
1922	5,116	4,317	5,799	2,357	3,538	637	21,764
1923	5,318	4,333	5,906	2,373	3,555	663	22,148
1924	5,523	4,434	6,040	2,452	3,629	673	22,751
1925	5,656	4,483	6,114	2,452	3,733	673	23,111

A graph indicating the mileage open in Australia at the end of each of the years 1870 to 1925 accompanies this chapter.

The appended statement shows the actual mileage opened for traffic in the year 1925, and also the annual average increase in mileage opened since 1915 in each State :—

RAILWAYS, STATE.—MILEAGE OPENED ANNUALLY.

Mileage.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
Mileage opened during 1924–25	132.95	48.94	74.46	..	103.83	..	360.18
Average annual mileage increase for 10 years to 30th June, 1925 ..	152.18	60.86	127.64	29.47	40.07	13.99	424.21

(ii) *New South Wales.* During the year ended 30th June, 1925, the following extensions and new lines were opened for traffic :—Glenreagh to Dorrigo (43.21 miles); Castle Hill to Rogan's Hill (0.84 miles); Molong–Yeoval–Dubbo (79.95 miles); Regent's Park to Cabramatta (5.18 miles); and Regent's Park to Enfield Marshalling Yards (3.23 miles). Readjustments of actual mileage open increased the mileage by 0.54 miles making a total increase for the year of 132.95 miles.

(iii) *Victoria.* The following lines were opened for traffic during 1924–25:—Kerang to Gonn Crossing (16.11 miles); Hopetoun to Patchewollock (26.96 miles); and Merbein to Abbotsford (Yelta) (5.87 miles).

(iv) *Queensland.* Through communication between Brisbane and Southern stations and the Cairns Railway has been established by the completion and opening for traffic of the sections from Lilypond to Feluga (59.14 miles) and Innisfail to Daradgee (3.07 miles). Another line opened to traffic during the year was from Barlil to Windera (12.25 miles), making a total increase of 74.46 miles for the year.

(v) *South Australia.* No new lines were opened to traffic during the year.

(vi) *Western Australia.* The following extensions were opened for traffic during the year:—Busselton–Witchcliffe–Flinders Bay (66.85 miles) and Narembeen to Merredin (53.59 miles). The line from Waroona to Lake Clifton (16.61 miles) was pulled up, making the total increase for the year 103.84 miles.

(vii) *Tasmania.* No new extensions were opened during the year.

3. **Length and Gauge of Railway Systems in each State.**—In all the States the Government railways are grouped, for the convenience of administration and management, into several divisions or systems. A summary showing concisely the gauge and length of the main and branch lines included in each division or system in the different States for the year ended 30th June, 1925, is given in the Transport and Communication Bulletin No. 17 issued by this Bureau.

4. **Average Mileage Worked and Train-Miles Run.**—The total mileage open for traffic at the end of each financial year has been given previously, but, in considering the returns relating to revenue and expenditure and other matters, it is desirable to know the average number of miles actually worked during each year. The next table shows the average number of miles worked and the total number of train-miles run by the Government railways of each State during the years 1921 to 1925 inclusive:—

RAILWAYS, STATE.—MILEAGE WORKED AND MILES RUN, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
			AVERAGE MILEAGE WORKED.				
1921 ..	5,019	4,237	5,733	2,333	3,538	637	21,497
1922 ..	5,077	4,279	5,784	2,344	3,538	635	21,657
1923 ..	5,197	4,314	5,868	2,359	3,552	663	21,953
1924 ..	5,460	4,369	5,960	2,416	3,593	668	22,466
1925 ..	5,571	4,448	6,078	2,452	3,669	673	22,891
			TRAIN-MILES RUN.				
1921 ..	22,792,053	15,533,556	10,735,723	5,712,491	4,918,113	1,387,417	61.079,353
1922 ..	21,887,065	15,856,815	9,634,532	5,629,957	4,564,631	1,433,099	59,006,099
1923 ..	21,693,861	16,394,239	10,917,584	5,792,798	4,505,299	1,434,816	60,738,597
1924 ..	23,755,897	17,244,[illegible]07	11,647,077	6,791,620	4,839,285	1,416,216	65,694,602
1925 ..	25,925,034	18,275,872	12,959,332	7,344,826	5,068,737	1,380,405	70,954,206

In some years the average mileage worked in Tasmania is greater than the mileage open, owing to the Railway Department having running powers over certain private lines. The particulars of train-miles run given in the foregoing table are not strictly comparable over the quinquennium owing to the fact that "assistant" and "light mileage" were not generally included prior to 1923–24.

5. **Lines under Construction, and Lines Authorized, 1925.**—(i) *General.* The following statement gives particulars up to the 30th June, 1925, of the mileage of State railways (*a*) under construction, and (*b*) authorized for construction but not commenced:—

RAILWAYS, STATE.—MILEAGE UNDER CONSTRUCTION AND AUTHORIZED, 30th JUNE, 1925.

Particulars.	N.S.W.	Vic. (a)	Q'land.	S.A.	W.A.	Tas.	All States.
Mileage under construction	237.34	180.25	b506.00	50.18	133.50	..	1,107.27
Mileage authorized but not commenced ..	319.14	155.25	1,219.00	53.05	264.00	..	2,010.44

(a) See sub-section (b) below.
(b) Exclusive of 130 miles on which work has been suspended.

(ii) *Lines under Construction.* In spite of the great extensions of State railways since the year 1875, there are still, in some of the States, immense areas of country which are as yet practically undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the State is to extend the existing lines inland in the form of light railways as settlement increases, and while it is true that lines which were not likely to be commercially successful in the immediate future have been constructed from time to time for the purpose of encouraging settlement, the general principle that the railways should be self-supporting is kept in view.

(a) *New South Wales.* The total mileage under construction was 237.34 miles, consisting of the following lines:—Sydenham to Botany (5.20 miles); The Rock to Pulletop (26.12 miles); Roslyn to Taralga (15.83 miles); Richmond to Kurrajong (7.00 miles); Trida to Menindie (159.31 miles); Booyong to Ballina (12.79 miles); and the City and Suburban Railway (11.09 miles).

(b) *Victoria.* In this State 22.25 miles of 5 ft. 3 in. gauge lines are being constructed, viz.:—Kooloonong to West Narrung (7 miles) and Werrimul to The Hut (15.25 miles). The Border Railways Act 1922 (Vic. 3194) provides for the construction of 158 miles in New South Wales Territory, viz.:—Moama to Balranald (120 miles) and Gonn Crossing to Stony Crossing (38 miles). On completion these lines, which are of 5 ft. 3 in. gauge, will be taken over and operated by the Victorian Railways Commissioners.

(c) *Queensland.* In previous issues of the Year Book details were given of the scheme of railway construction under the provisions of the North Coast Railway Act 1910 (see Year Book No. 15, p. 551). On the 30th June, 1925, the following lines, of an aggregate length of 506 miles, were under construction:—Central Division—Many Peaks to Monto (45 miles); Callide to Monto (78 miles); Baralaba to Castle Creek (59 miles); and Longreach to Winton (110 miles); Southern Division—Ceratodus to Monto (34 miles); and Tara towards Surat (50 miles). The following lines are partially constructed, but work thereon is temporarily suspended:—Wallaville to Kalliwa (18 miles); Yaraka to Powell's Creek (27 miles); Dajarra to Moonah Creek (41 miles); Mt. Molloy Extension (7 miles); and Winton to 37-Mile (37 miles); a total of 130 miles.

(d) *South Australia.* The construction of the following lines was in progress at 30th June, 1925:—Snowtown to Red Hill (16.38 miles); Wanbi to Moorook (31.30 miles); and Paringa to Renmark (2.50 miles); making a total of 50.18 miles, all of which are of 5 ft. 3 in. gauge.

(e) *Western Australia.* The following lines were in course of construction by the Public Works Department on the 30th June, 1925:—Esperance to Salmon Gums (66.50 miles); Piawing northward (23 miles); Bridgetown to Jarnadup (5 miles); and Lake Grace to Newdegate (39 miles); a total of 133.50 miles.

(f) *Tasmania.* At 30th June, 1925, no railway construction work was in progress.

(iii) *Lines Authorized for Construction.* (a) *New South Wales.* At the 30th June, 1925, the following lines had been authorized for construction but not commenced:—Gilgandra to Collie (21.51 miles); Grafton to South Grafton, with bridge over Clarence

River (2.34 miles); Bankstown to Regent's Park (2.35 miles); Camurra to Boggabilla (70 miles); Ungarie to Naradhun (37 miles); Uranquinty towards Moon's Siding (28.44 miles); Wyalong to Condobolin (33 miles); Moss Vale to Port Kembla (38.08 miles): Jerilderie towards Deniliquin (25.00 miles); Rand to Bull's Plains (27.55 miles); Canowindra to Gregra (33.87 miles); a total distance of 319.14 miles.

(*b*) *Victoria.* The following lines were authorized, but construction had not been commenced up to the end of June, 1925 :—5 ft. 3 in. gauge : Goroke to Morea (9 miles); Kanagulk to Edenhope (37.75 miles); Mildura to Murray River (4 miles); Bowser to Peechelba (11 miles); and Marnoo to Wallaloo (6.50 miles). Under the Border Railways Act 1922, the following lines have been approved for construction in New South Wales territory :—Yarrawonga (Victoria) to Oatlands (New South Wales) (37 miles); Euston (New South Wales) to Benanee and beyond (New South Wales) (30 miles); and Gol Gol Extension (20 miles); an aggregate distance of 155.25 miles.

(*c*) *Queensland.* In addition to the new lines upon which work has been commenced, Parliament has authorized the construction of the following parts of the Great Western Railway—Section A, from Quilpie to Eromanga (120 miles); Section B, from Powell's Creek (224 miles); Section C, from 37-Mile to Springvale (324 miles); and Section D, from Moonah Creek (216 miles). The following lines were also authorized for construction—Inglewood to Texas and Silverspur (44 miles); Mount Edwards to Maryvale (28 miles); Lanefield to Rosevale (17 miles); Gatton to Mount Sylvia (11 miles); Juandah to Taroom (42 miles); Dirranbandi extension (52 miles); Yarraman to Nanango (16 miles); Brooloo to Kenilworth (10 miles); Dobbyn to Myally Creek (50 miles); Peeramon towards Boongee (11 miles); and Duchess to Mt. Isa (54 miles); a total of 1,219 miles.

(*d*) *South Australia.* Parliament has authorized the construction of lines on the 5 ft. 3 in. gauge from Bumbunga to Lochiel (5 miles); on the 3 ft. 6 in. gauge from Kielpa to Mangalo Hall (21.20 miles); Kimba to Buckleboo (21.85 miles); and from Kowulka to Sec. 2, Hundred of Kevin (5 miles). The conversion of certain 3 ft. 6 in. gauge lines in the north-west of the State to 5 ft. 3 in. gauge has also been authorized. About 175 miles of line are involved in this scheme.

(*e*) *Western Australia.* The following lines were authorized for construction up to the 30th June, 1925 :—Bridgetown–Jarnadup (Part) (22 miles); Albury to Denmark (35 miles); Yarramony eastwards (85 miles); Brookton to Dale River (27 miles); Dwarda to Narrogin (36 miles); and Norseman to Salmon Gums (59 miles); a total distance of 264 miles.

(*f*) *Tasmania.* There were no new railways authorized on which work had not been commenced at 30th June, 1925.

6. **Cost of Construction and Equipment.**—(i) *General.* The total cost of construction and equipment of the State railways at the 30th June, 1925, amounted to £264,346,874, or to an average cost of £11,435 per mile open for traffic. Particulars of the capital expenditure incurred on lines open for traffic are given in the following table :—

RAILWAYS, STATE.—MILEAGE AND COST TO 30th June, 1925.

State.	Length of Line Open (Route).	Total Cost of Construction and Equipment.	Average Cost per Mile Open.	Cost per Head of Population.	Mileage per 1,000 of Population.
	Miles.	£	£	£	Miles.
New South Wales (*a*) ..	5,655.75	98,060,216	17,338	43.16	2.49
Victoria	4,483.62	(*b*) 67,136,069	(*b*) 14,974	40.18	2.68
Queensland	6,114.42	49,453,595	8,088	57.83	7.15
South Australia (*a*) ..	2,451.70	(*c*) 23,637,283	(*c*) 9,641	43.52	4.51
Western Australia (*a*) ..	3,732.66	19,643,517	5,263	53.37	10.14
Tasmania	672.90	6,416,194	9,535	30.28	3.18
All States ..	23,111.05	264,346,874	11,435	44.65	39.03

(*a*) Exclusive of Federal railways.
(*b*) Exclusive of cost of line from Murrayville to South Australian border (12.53 miles).
(*c*) Exclusive of cost of line from Mount Gambier to Victorian border (11.67 miles).

The lowest average cost (£5,263) per mile open is in Western Australia, and the highest (£17,338) in New South Wales, as compared with an average of £11,435 for all States. There were few costly engineering difficulties in Western Australia, and the fact that contractors were permitted to carry traffic during the term of their contracts considerably reduced expenditure, particularly in respect of all goldfield contracts.

In the table above the figures relating to cost of construction and equipment do not include the discounts and flotation charges on loans allocated to the railways. This will explain the reason for the differences between the amounts shown therein for Queensland, South Australia, and Western Australia, and those shown in the Railway Reports for these States.

(ii) *Capital Cost, All Lines.* (*a*) *Total.* The increase in the total capital cost of construction and equipment of Government railways for each year from 1921 to 1925 is shown in the following table :—

RAILWAYS, STATE.—CAPITAL COST OF LINES OPEN, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria. (*a*)	Q'land.	S. Aust. (*b*)	W. Aust.	Tasmania.	All States.
			TOTAL COST OF LINES OPEN.				
	£	£	£	£	£	£	£
1921 ..	80,756,194	59,798,696	41,368,640	19,270,704	18,169,980	5,383,192	(*a*, *b*)224,747,406
1922 ..	83,789,871	62,941,364	42,519,012	19,742,821	18,330,557	5,753,381	(*a*, *b*)233,077,006
1923 ..	87,713,871	64,615,435	44,823,991	20,234,003	18,555,115	6,199,725	(*a*, *b*)242,142,140
1924 ..	91,792,167	65,880,792	47,367,439	21,410,602	18,967,443	6,374,784	(*a*, *b*)251.793,227
1925 ..	98,060,216	67,136,069	49.453,595	23,637,283	19,643,517	6,416,194	(*a*, *b*)264,346,874
			COST PER MILE OPEN.				
1921 ..	16,014	14,016	7,192	8,259	5,135	8,547	(*a*, *b*)10,495
1922 ..	16,378	14,560	7,332	8,376	5,181	9,035	(*a*, *b*)10,707
1923 ..	16,494	14,883	7,590	8,527	5,219	9,346	(*a*, *b*)10,933
1924 ..	16,621	14,856	7,842	8,733	5,227	9,474	(*a*, *b*)11,067
1925 ..	17,338	14,974	8,088	9,641	5,263	9,535	(*a*, *b*)11,435

(*a*) Exclusive of cost of line from Murrayville to South Australian border (12.53 miles).
(*b*) Exclusive of cost of line from Mount Gambier to Victorian border (11.67 miles).

(*b*) *From Consolidated Revenue.* The following table shows the amounts provided from Consolidated Revenue for construction and equipment to 30th June, 1925 :—

RAILWAYS, STATE.—EXPENDITURE FROM CONSOLIDATED REVENUE FOR CONSTRUCTION AND EQUIPMENT TO 30th JUNE, 1925.

To 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
1925 ..	659,930	4,028,663	..	621,421	798,050	16,935	6,124,999

(iii) *Loan Expenditure.* The subjoined table shows the total loan expenditure on Government railways (including lines both open and unopen) in each State, except Tasmania, and on Government railways and tramways in the latter State for the years 1921 to 1925 :—

RAILWAYS, STATE.—LOAN EXPENDITURE, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	All States.
	£	£	£	£	£	£	£
1921 ..	3,598,351	1,685,329	1,760,932	252,097	145,724	254,079	7,696,512
1922 ..	4,399,725	3,478,021	1,226,280	572,482	323,296	490,990	10,490,794
1923 ..	4,177,273	1,674,643	2,134,162	659,120	519,557	254,120	9,418,875
1924 ..	2,914,722	1,395,282	2,318,205	779,441	561,988	250,514	8,220,152
1925 ..	4,246,963	1,379,182	1,741,805	2,151,329	534,103	23,638	10,077,020

(a) Including tramways.

The following statement shows the total loan expenditure on railways to the 30th June, 1925 :—

RAILWAYS, STATE.—TOTAL LOAN EXPENDITURE TO 30th JUNE, 1925.

State ..	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.a	All States
	£	£	£	£	£	£	£
Expenditure	103,223,693	66,250,088	52,048,907	25,575,984	19,525,665	6,875,327	273,499,664

(a) Including tramways.

7. **Gross Revenue.**—(i) *General.* The total revenue from all sources, the revenue per average mile worked, and the revenue per train-mile run during each financial year from 1921 to 1925 inclusive were as follows :—

RAILWAYS, STATE.—GROSS REVENUE, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States
TOTAL GROSS REVENUE.							
	£	£	£	£	£	£	£
1921	14,267,205	9,795,763	5,279,412	2,942.028	2,720,032	600,045	35,604,485
1922	15,213,019	10,791,082	5,154,530	3,297,347	2,827,856	588,297	37,872,131
1923	15,221,333	11.347,057	5,420.400	3,710,922	2,915,985	572,417	39,188,114
1924	15,616,577	11,958,635	5,714,036	3,929,428	3,227,371	585,468	41,031,515
1925 ..	16,769,452	12,759,197	7,109,210	4,012,736	3,359,501	548,256	44,558,352
GROSS REVENUE PER AVERAGE MILE WORKED.							
	£	£	£	£	£	£	£
1921	2,843	2,312	921	1,261	768	942	1,656
1922	2,996	2,522	891	1,406	799	927	1,749
1923	2,929	2,630	924	1,573	821	863	1,785
1924	2,860	2,737	959	1,627	898	877	1,826
1925	3,010	2,869	1,170	1,637	916	815	1,947
GROSS REVENUE PER TRAIN-MILE RUN.							
	d.	d.	d.	d.	d.	d.	d.
1921	150.23	151.35	118.02	123.60	132.74	103.79	139.90
1922	166.82	163.33	128.40	140.56	148.68	98.51	150.04
1923	168.39	166.11	119.15	153.74	155.34	95.74	154.85
1924	173.65	172.95	125.94	152.43	167.09	101.35	160.71
1925	172.70	175.16	140.92	144.75	166.47	96.82	162.64

The amounts of revenue earned per average mile worked and per train-mile run in respect of (a) coaching and (b) goods and live stock traffic, separately, are given later.

(ii) *Coaching, Goods, and Miscellaneous Receipts.* (*a*) *Totals.* The gross revenue is composed of (*a*) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (*b*) receipts from the carriage of goods and live stock; and (*c*) rents and miscellaneous items. The subjoined table shows the gross revenue for 1921 to 1925, classified according to the three chief sources of receipts. The total of the three items specified has already been given in the preceding paragraph.

RAILWAYS, STATE.—COACHING, GOODS, ETC., RECEIPTS, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
COACHING TRAFFIC RECEIPTS.							
	£	£	£	£	£	£	£
1921 ..	6,384,031	4,897,258	1,885,677	1,185,878	911,007	270,635	15,534,486
1922 ..	6,636,530	5,376,620	1,898,050	1,240,354	973,153	263,340	16,388,047
1923 ..	6,694,353	5,664,738	2,008,282	1,270,590	972,318	262,373	16,872,654
1924 ..	6,797,888	5,914,559	2,092,693	1,286,298	996,776	253,386	17,341,600
1925 ..	6,942,093	5,981,437	2,482,026	1,317,102	971,323	221,668	17,915,649
GOODS AND LIVE STOCK TRAFFIC RECEIPTS.							
1921 ..	7,270,856	4,411,276	3,267,289	1,719,556	1,637,979	320,798	18,627,754
1922 ..	7,953,909	4,815,056	3,105,485	2,000,716	1,688,482	312,890	19,876,538
1923 ..	7,868,769	4,953,192	3,290,471	2,378,034	1,768,211	294,831	20,553,508
1924 ..	8,096,274	5,204,526	3,487,987	2,558,706	2,050,707	318,668	21,716,868
1925 ..	9,010,929	5,775,522	4,477,985	2,607,628	2,198,322	312,706	24,383,092
MISCELLANEOUS RECEIPTS.							
1921 ..	612,318	487,229	126,446	36,594	171,046	8,612	1,442,245
1922 ..	622,580	599,406	150,995	56,277	166,221	12,067	1,607,546
1923 ..	658,211	729,127	121,647	62,298	175,456	15,213	1,761,952
1924 ..	722,415	839,550	133,356	84,424	179,888	13,414	1,973,047
1925 ..	816,430	1,002,238	149,199	88,006	189,856	13,882	2,259,611

(*b*) *Percentages.* The following table shows for the two years 1923–24 and 1924–25 the percentage which each class of receipts bears to the total gross revenue :—

RAILWAYS, STATE.—PERCENTAGES OF RECEIPTS, 1924 AND 1925.

State.	1924.			1925.		
	Coaching.	Goods and Live Stock.	Miscellaneous.	Coaching.	Goods and Live Stock.	Miscellaneous.
	%	%	%	%	%	%
New South Wales ..	43.53	51.84	4.63	41.40	53.73	4.87
Victoria	49.46	43.52	7.02	46.88	45.26	7.86
Queensland	36.62	61.04	2.34	34.91	62.99	2.10
South Australia ..	32.73	65.12	2.15	32.82	64.98	2.20
Western Australia ..	30.89	63.54	5.57	28.91	65.44	5.65
Tasmania	43.28	54.43	2.29	40.43	57.04	2.53
All States ..	42.23	52.93	4.81	40.21	54.72	5.07

(*c*) *Averages for Coaching Traffic Receipts.* The subjoined table shows the receipts from coaching traffic per average mile of line worked and per passenger-train-mile in each State for the year ended the 30th June, 1925 :—

RAILWAYS, STATE.—COACHING TRAFFIC RECEIPTS, AVERAGES, 1925.

State.	Number of Passenger-Train-Miles.	Coaching Traffic Receipts.		
		Gross.	Per Average Mile Worked.	Per Passenger-Train-Mile.
	No.	£	£	*d.*
New South Wales	12,615,832	6,942,093	1,246	132.06
Victoria	11,602,200	5,981,437	1,345	123.73
Queensland	4,295,003	2,482,026	408	138.69
South Australia	3,460,462	1,317,102	537	91.35
Western Australia	*a*2,015,692	971,323	265	115·65
Tasmania	*a*654,135	221,668	329	81.32
All States	34,643,324	17,915,649	783	124.11

(*a*) Includes " Assistant " and " Light " Mileage.

(*d*) *Averages for Goods and Live Stock Traffic.* The gross receipts from goods and live stock traffic per average mile worked, per goods-train-mile, and per ton carried, for the year ended the 30th June, 1925, are given below :—

RAILWAYS, STATE.—GOODS AND LIVE-STOCK TRAFFIC RECEIPTS, AVERAGES, 1925.

State.	Number of Goods-Train-Miles.	Goods and Live-Stock Tonnage.	Goods and Live-Stock Traffic Receipts.			
			Gross.	Per Average Mile Worked.	Per Goods-Train-Mile.	Per Ton Carried.
	No.	Tons.	£	£	*d.*	*d.*
New South Wales ..	10,689,084	*b*16,026,532	9,010,929	1,617	202.32	134.94
Victoria	5,879,806	8,959,556	5,775,522	1,298	235.74	154.71
Queensland ..	7,812,992	5,083,658	4,477,985	737	137.56	211.41
South Australia ..	3,192,786	3,611,313	2,607,628	1,064	196.01	173.30
Western Australia ..	*a*3,053,045	3,284,915	2,198,322	599	172.81	160.61
Tasmania	*a*726,270	690,561	312,706	465	103.33	108.68
All States ..	31,353,983	37,656,535	24,383,092	1,065	186.64	155.40

(*a*) Includes " Assistant " and " Light " Mileage.

(*b*) Excludes 181,944 tons of coal on which wayleave charges only were collected.

8. **Working Expenses.**—(i) *General.* In order to make an adequate comparison of the working expenses, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the railways of the different States, but also on different portions of the same system. Where traffic is light, the percentage of working expenses is naturally greater than where traffic is heavy ; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

The following table shows the total annual expenditure and the percentage thereof on gross revenue in each State for the years 1921 to 1925 :—

RAILWAYS, STATE.—WORKING EXPENSES, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
			TOTAL WORKING EXPENSES.				
	£	£	£	£	£	£	£
1921	11,032,677	7,835,756	5,048,498	2,655,465	2,422,004	476,187	29,470,587
1922	11,116,302	8,026,665	4,810,362	2,537,110	2,328,843	538,066	29,357,348
1923	10,649,974	8,181,926	4,714,262	2,781,547	2,210,348	514,350	29,052,407
1924	10,917,491	8,718,394	4,990,749	2,901,298	2,297,980	552,877	30,378,779
1925	11,939,686	9,429,728	5,425,167	2,935,755	2,355,087	531,590	32,617,013
			PERCENTAGE OF WORKING EXPENSES ON GROSS REVENUE.				
	%	%	%	%	%	%	%
1921	77.33	79.99	95.63	90.26	89.04	79.35	82.77
1922	73.07	74.38	93.32	76.94	82.35	91.46	77.52
1923	69.97	72.11	86.97	74.96	75.80	89.86	74.14
1924	69.91	72.90	87.34	73.84	71.20	94.43	74.03
1925	71.20	73.90	76.31	73.16	70.10	96.96	73.20

The variation in the percentage of working expenses on the gross revenue in each State for the years 1865 to 1925 is illustrated in the graph which accompanies this chapter.

(ii) *Averages.* The next table shows the working expenses per average mile worked and per train-mile run in each State for the years 1921 to 1925 :—

RAILWAYS, STATE.—WORKING EXPENSES, AVERAGES, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
			WORKING EXPENSES PER AVERAGE MILE WORKED.				
	£	£	£	£	£	£	£
1921	2,198	1,849	881	1,138	684	748	1,371
1922	2,189	1,876	832	1,082	658	848	1,356
1923	2,049	1,896	803	1,179	622	775	1,323
1924	1,999	1,995	837	1,201	640	828	1,352
1925	2,143	2,120	893	1,197	642	799	1,425
			WORKING EXPENSES PER TRAIN-MILE RUN.				
	d	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1921	116.17	118.21	112.86	111.56	118.19	82.37	115.10
1922	121.89	121.49	119.83	108.15	122.45	90.11	119.41
1923	117.82	119.78	103.63	115.24	117.75	86.03	114.79
1924	121.40	126.08	110.00	112.55	118.97	95.71	118.99
1925	122.96	129.45	107.54	105.90	116.70	93.87	119.05

The working expenses per average mile worked for all States for the year 1925 increased by £73 over the year 1924, but at the same time it must be taken into consideration that the gross revenue shows a still greater increase, viz., £121. The working expenses per train-mile run increased during the same period by 10.06d., while the gross revenue rose by 21.93d.

(iii) *Distribution.* The subjoined table shows the distribution of working expenses, under four chief heads of expenditure, for the years 1921 to 1925 :—

RAILWAYS, STATE.—DISTRIBUTION OF WORKING EXPENSES, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
			MAINTENANCE.				
	£	£	£	£	£	£	£
1921	1,808,531	1,576,857	1,153,095	526,120	561,845	122,349	5,748,797
1922	1,940,794	1,708,539	1,162,367	400,541	557,091	152,168	5,921,500
1923	1,891,233	1,761,951	1,103,893	414,395	513,790	144,973	5,830,235
1924	1,865,096	1,861,887	1,197,992	545,987	543,387	151,186	6,165,535
1925	2,176,435	1,963,960	1,280,190	501,800	527,493	144,612	6,594,490
			LOCOMOTIVE, CARRIAGE, AND WAGON CHARGES.				
1921	5,466,880	3,541,967	2,374,560	1,414,866	1,095,300	229,154	14,122,727
1922	5,474,485	3,426,370	2,165,438	1,417,305	1,074,460	239,158	13,797,216
1923	5,247,980	3,482,711	2,120,267	1,579,432	1,042,751	228,308	13,701,449
1924	5,360,663	3,219,267	2,214,001	1,548,799	1,092,580	234,562	13,669,872
1925	5,772,631	3,501,911	2,459,370	1,560,923	1,124,157	223,302	14,642,294
			TRAFFIC EXPENSES.				
1921	3,027,041	2,246,443	1,428,008	651,579	688,077	109,521	8,150,669
1922	2,993,601	2,395,694	1,387,425	660,202	621,058	125,038	8,183,018
1923	2,806,970	2,399,867	1,400,869	722,641	592,445	117,607	8,040,399
1924	2,939,236	3,081,776	1,487,334	738,845	599,678	122,395	8,969,264
1925	3,121,001	3,228,961	1,593,347	792,762	639,193	122,374	9,497,638
			OTHER CHARGES.				
1921	730,225	470,489	92,835	62,900	76,782	15,163	1,448,394
1922	707,422	496,062	95,132	59,062	76,234	21,702	1,455,614
1923	703,791	537,397	89,233	65,079	61,362	23,462	1,480,324
1924	752,496	555,464	91,422	67,667	62,335	42,042	1,571,426
1925	869,619	734,896	92,260	80,270	64,244	41,302	1,882,591

In New South Wales and Victoria the expenditure in connexion with refreshment rooms is included in " Other Charges."

9. **Net Revenue.**—(i) *Net Revenue and Percentage on Capital Cost.* The following table shows the net sums available to meet interest charges, also the percentage of such sums upon the capital cost of construction and equipment of lines open for traffic in each State for the years 1921 to 1925 :—

RAILWAYS, STATE.—NET REVENUE AND PERCENTAGE THEREOF ON CAPITAL COST OF LINES OPEN, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
			NET REVENUE.				
	£	£	£	£	£	£	£
1921	3,234,528	1,960,007	230,914	286,563	298,028	123,858	6,133,898
1922	4,096,717	2,764,417	344,168	760,237	499,013	50,231	8,514,783
1923	4,571,359	3,165,131	706,138	929,375	705,637	58,067	10,135,707
1924	4,699,086	3,240,241	723,287	1,028,130	929,391	35,283	10,655,418
1925	4,829,766	3,329,469	1,684,043	1,076,981	1,004,414	16,666	11,941,339
			PERCENTAGE OF NET REVENUE ON CAPITAL EXPENDITURE.				
	%	%	%	%	%	%	%
1921	3.93	3.27	0.56	1.48	1.64	2.30	2.72
1922	4.89	4.39	0.81	3.85	2.72	0.87	3.65
1923	5.21	4.90	1.58	4.59	3.80	0.94	4.19
1924	5.12	4.92	1.53	4.80	4.90	0.51	4.23
1925	4.93	4.96	3.41	4.56	5.11	0.26	4.51

These figures are also represented in the graphs which accompany this chapter.

The percentage of net revenue on capital expenditure for all States during the past five years reached its maximum during the year 1924–25, with a return of 4.51. This was, however, insufficient to meet interest charges, for which particulars are included in the following sub-section.

(ii) *Net Revenue Averages.* Tables showing the gross earnings and the working expenses per average mile worked and per train-mile run have been given previously. The net earnings, *i.e.*, the excess of gross earnings over working expenses per average mile worked and per train-mile run are shown in the following table :—

RAILWAYS, STATE.—NET REVENUE AVERAGES, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
NET REVENUE PER AVERAGE MILE WORKED.							
	£	£	£	£	£	£	£
1921	645	463	40	123	84	194	286
1922	807	646	59	324	141	79	393
1923	880	734	121	394	199	88	462
1924	861	742	122	426	258	49	474
1925	867	749	277	439	273	25	522
NET REVENUE PER TRAIN-MILE RUN.							
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1921	34.06	29.56	5.16	12.04	14.55	21.42	23.95
1922	44.93	41.84	8.57	32.41	26.23	8.41	30.63
1923	50.57	46.33	15.52	38.50	37.59	9.71	40.05
1924	52.25	46.87	15.94	39.88	48.12	5.64	41.72
1925	49.74	45.71	33.38	38.85	49.77	2.95	43.58

10. **Profit or Loss.**—The following table shows the amount of interest payable on expenditure from loans on the construction and equipment of the railways, the actual profit or loss after deducting working expenses and interest and all other charges from the gross revenue, and the percentage of such profit or loss on the total capital cost of construction and equipment for the last five years :—

RAILWAYS, STATE.—PROFIT OR LOSS, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
AMOUNT OF INTEREST ON RAILWAY LOAN EXPENDITURE.							
	£	£	£	£	£	£	£
1921	3,811,560	2,401,132	1,811,974	847,867	716,398	205,765	9,794,696
1922	4,217,881	2,580,001	1,924,375	905,319	756,737	228,488	10,612,801
1923	4,487,303	2,937,709	1,998,694	923,606	768,244	255,007	11,370,563
1924	4,693,417	3,001,370	2,136,187	977,376	787,221	263,157	11,858,728
1925	4,796,829	3,085,648	2,419,503	1,018,117	813,849	279,832	12,413,778
PROFIT OR LOSS AFTER PAYMENT OF WORKING EXPENSES, INTEREST, AND OTHER CHARGES.							
	£	£	£	£	£	£	£
1921	− 577,032	− 441,125	−1,581,060	− 561,304	− 418,370	− 81,907	−3,660,798
1922	− 121,164	+ 184,416	−1,580,207	− 145,082	− 257,724	− 178,257	−2,098,018
1923	+ 84,056	+ 227,422	−1,292,556	+ 5,769	− 62,607	− 196,940	−1,234,856
1924	+ 5,669	+ 238,871	−1,412,900	+ 50,754	+ 142,170	− 227,874	−1,203,310
1925	+ 32,937	+ 243,821	− 735,460	+ 58,864	+ 190,565	− 263,166	− 472,439
PERCENTAGE OF PROFIT OR LOSS ON CAPITAL COST OF CONSTRUCTION AND EQUIPMENT.							
	%	%	%	%	%	%	%
1921	−0.70	−0.74	−3.82	−2.91	−2.30	−1.52	−1.62
1922	−0.15	+0.29	−3.72	−0.74	−1.41	−3.10	−0.90
1923	+0.10	+0.35	−2.88	+0.03	−0.34	−3.18	−0.51
1924	+0.01	+0.36	−2.98	+0.24	+0.75	−3.57	−0.48
1925	+0.03	+0.36	−1.49	+0.25	+0.97	−4.10	−0.18

— Indicates a loss.

Interest charges in 1924–25 show an increase of £2,619,082 over the amount payable in 1920–21, in which year the interest payable on the total cost of construction and equipment was at the rate of 4.36 per cent. as against 4.70 per cent. in 1925.

11. **Traffic.**—(i) *General.* Reference has already been made to the difference in the traffic conditions on many of the lines. These conditions differ not only in the several States, but also on different lines in the same States, and apply to both passenger and goods traffic. By far the greater part of the population of Australia is confined to a fringe of country near the coast, more especially in the eastern and southern districts. A large proportion of the railway traffic between the chief centres of population is therefore carried over lines in the neighbourhood of the coast, and is thus, in some cases, open to sea-borne competition. On most of the lines extending into the interior traffic is light, as the density of population diminishes rapidly as the coastal regions are left behind, with a consequent diminution in the volume of traffic, while, in comparison with other more settled countries, there is but little back loading.

The following table gives particulars for the years 1921 to 1925 :—

RAILWAYS, STATE.—TRAFFIC, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
			NUMBER OF PASSENGER JOURNEYS.				
1921 ..	120,735,140	134,045,683	27,735,179	23,787,884	17,732,571	2,687,837	326,724,294
1922 ..	121,298,861	142,456,924	27,155,606	23,316,141	17,895,509	2,757,702	334,880,743
1923 ..	123,714,639	155,957,240	28,358,170	24,475,170	17,830,292	2,884,210	353,219,721
1924 ..	128,101,184	167,861,864	29,535,981	25,177,933	18,133,168	2,959,887	371,770,017
1925 ..	128,532,038	166,444,142	29,657,832	25,647,487	17,196,672	2,656,018	370,134,189
			PER 100 OF MEAN POPULATION.				
1921 ..	5,732	8,720	3,627	4,782	5,322	1,260	5,992
1922 ..	5,645	9,067	3,469	4,606	5,272	1,283	6,020
1923 ..	5,648	9,700	3,533	4,730	5,120	1,339	6,216
1924 ..	5,749	10,224	3,579	4,753	5,044	1,379	6,411
1925 ..	5,652	9,959	3,483	4,715	4,670	1,244	6,249
			PER AVERAGE MILE OF LINE WORKED.				
1921 ..	24,058	31,639	4,838	10,195	5,012	4,220	15,199
1922 ..	23,892	33,290	4,695	9,945	5,059	4,345	15,462
1923 ..	23,805	36,151	4,833	10,375	5,020	4,350	16,090
1924 ..	23,461	38,417	4,957	10,422	5,047	4,433	16,548
1925 ..	23,071	37,424	4,879	10,461	4,687	3,947	16,170
			TONNAGE OF GOODS AND LIVE STOCK CARRIED.				
1921 ..	15,563,131	7,572,093	3,867,650	2,682,218	2,604,068	672,127	32,962,187
1922 ..	14,197,055	7,491,031	3,732,413	2,827,681	2,548,258	621,751	31,418,189
1923 ..	13,801,310	7,517,216	4,208,989	3,283,594	2,624,320	568,346	32,003,775
1924 ..	15,693,127	8,309,543	4,273,926	3,565,307	3,023,299	706,961	35,572,163
1925 ..	*a*16,026,532	8,959,556	5,083,658	3,611,313	3,284,915	690,561	37,656,535
			PER 100 OF MEAN POPULATION.				
1921 ..	739	402	506	539	782	315	605
1922 ..	661	477	477	559	751	289	565
1923 ..	630	467	524	635	754	264	563
1924 ..	704	506	518	671	841	329	612
1925 ..	705	536	597	664	892	323	636
			PER AVERAGE MILE OF LINE WORKED.				
1921 ..	3,101	1,787	675	1,150	736	1,055	1,533
1922 ..	2,796	1,751	645	1,206	720	980	1,451
1923 ..	2,656	1,743	717	1,391	739	857	1,458
1924 ..	2,874	1,902	717	1,476	842	1,059	1,583
1925 ..	2,877	2,014	836	1,473	895	1,026	1,645

(*a*) Excludes 181,944 tons on which only wayleave charges were collected.

(ii) *Metropolitan and Country Passenger Traffic and Revenue.* A further indication of the difference in passenger traffic conditions is obtained from a comparison of the volume of metropolitan and suburban, and country traffic in each State. This is shown below for the year 1924–25 :—

RAILWAYS, STATE.—METROPOLITAN AND SUBURBAN, AND COUNTRY PASSENGER TRAFFIC AND RECEIPTS, 1924-25.

Particulars.	Passenger Journeys.			Revenue.		
	Metropolitan and Suburban.	Country.	Total.	Metropolitan and Suburban.	Country.	Total.
	No.	No.	No.	£	£	£
N.S.W. ..	*a*117,610,989	10,921,049	128,532,038	2,245,801	3,940,567	6,186,368
Victoria ..	*b*156,678,519	9,765,623	166,444,142	2,616,965	2,763,922	5,380,887
Queensland ..	22,839,805	6,818,027	29,657,832	414,369	1,609,581	2,023,950
S. Australia ..	*c* 23,501,501	2,145,986	25,647,487	425,674	688,884	1,114,558
W. Australia	14,891,570	2,305,102	17,196,672	274,294	543,451	817,745
Tasmania ..	(*d*)	(*d*)	2,656,018	(*d*)	(*d*)	187,701
Total	(*e*)	(*e*)	370,134,189	(*e*)	(*e*)	15,711,209

(*a*) Within 34 miles of Sydney and Newcastle, including the Richmond line. (*b*) Within 20 miles of Melbourne. (*c*) Within 25 miles of Adelaide. (*d*) Not available. (*e*) Incomplete.

Although the number of passenger journeys recorded in the metropolitan area in Victoria is considerably greater than in New South Wales, it must be borne in mind that in the latter State other transport facilities, viz., tramways, motor-omnibuses, and ferries, are more extensively used.

The reduction in the number of passengers as compared with the previous year is due to increased tramway and motor 'bus competition.

A more detailed analysis of the passenger traffic for the years ended 30th June, 1924 and 1925, is contained in the Transport and Communication Bulletin No. 17 issued by this Bureau.

(iii) *Electrification of Suburban and Country Railways.* Electrification of the Melbourne Suburban Railways was completed in April, 1923. The scheme comprised the electrification of 157 route-miles of steam-operated railway, including sidings, and the conversion and construction of the necessary rolling stock. Particulars of the lines concerned were given in Year Book No. 15, p. 564. Electrification of the Sydney Suburban System is being proceeded with. As the traffic on main country lines develops, it is intended to convert to electric traction busy sections which are within reasonable distance of a cheap power supply, and investigations are being made in order to determine which lines offer prospects of financial success.

(iv) *Goods Traffic.* (*a*) *Classification.* The differing conditions of the traffic in each State might also, to some extent, be analysed by an examination of the tonnage of various classes of commodities carried, and of the revenue derived therefrom. Comparative particulars regarding the quantities of some of the leading classes of commodities carried are available for all the States, and the following table shows the number of tons of various representative commodities carried, with the percentage of each class on the total for the financial year 1924–25 :—

RAILWAYS, STATE.—CLASSIFICATION OF COMMODITIES CARRIED, 1924-25.

State.	Minerals.	Fire-wood.	Grain and Flour.	Hay, Straw, and Chaff.	Wool.	Live Stock.	All other Commodities.	Total.
				Tons Carried.				
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales	9,663,576*a*	169,119	2,065,247*c*	378,200	143,175	651,599	2,955,616	16,026,532
Victoria ..	2,232,332	713,597*b*	1,861,134*d*	313,905	84,205	512,627	3,241,756	8,959,556
Queensland ..	1,211,948	270,329	1,828,486*d*	*e*	73,206	455,968	1,243,721	5,083,658
South Australia	1,052,989	*e*	673,791*d*	*e*	39,233	143,762	1,701,538	3,611,313
Western Australia	773,891	422,293	727,364	113,533	15,242	105,166	1,127,426	3,284,915
Tasmania ..	259,573	69,806	71,911*d*	53,363	3,191	22,539	210,178	690,561
All States ..	15,194,309	1,645,144	7,227,933	859,001	358,252	1,891,661	10,480,235	37,656,535
				Percentage on Total Tonnage Carried.				
	%	%	%	%	%	%	%	%
New South Wales	60.30	1.05	12.89	2.36	0.89	4.07	18.44	100.00
Victoria ..	24.92	7.97	20.77	3.50	0.94	5.72	36.18	100 00
Queensland ..	23.84	5.32	35.97	*e*	1.44	8.97	24.46	100.00
South Australia	29.16	*e*	18.66	*e*	1.08	3.98	47.12	100.00
Western Australia	23.56	12.86	22.14	3.46	0.46	3.20	34.32	100.00
Tasmania ..	37.59	10.11	10.41	7.73	0.46	3.26	30.44	100.00
All States	40.35	4.37	19.20	2.28	0.95	5.02	27.83	100.00

(*a*) Excludes 181,944 tons of coal on which wayleave charges only were collected. (*b*) Coal, stone, gravel, and sand. (*c*) Up journey only (to coast). (*d*) Agricultural produce. (*e*) Included in all other commodities.

(*b*) *Revenue.* The following table shows the revenue derived from goods and live stock traffic during 1924–25 according to a classification which has been adopted by all States :—

RAILWAYS, STATE.—GOODS, ETC., TRAFFIC—REVENUE, 1924-25.

Class.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
	£	£	£	£	£	£	£
General merchandise	5,482,686	4,550,773	2,750,902	1,369,227	1,783,029	230,769	16,167,386
Wheat	*a*	*a*	*a*	290,068	*a*	*a*	290,068
Wool	627,138	197,612	492,686	57,532	50,274	4,866	1,430,108
Live stock ..	1,155,272	550,060	826,956	182,710	131,430	19,968	2,866,396
Minerals—							
Coal, Coke, and shale ..	1,348,169	153,121	241,797	206,343	108,142	*c* 24,909	2,082,481
Others ..	397,664	323,956	165,644	501,748	125,447	*b* 32,194	1,546,653
Total ..	9,010,929	5,775,522	4,477,985	2,607,628	2,198,322	312,706	24,383,092

(*a*) Included with General Merchandise. (*b*) Native coal. (*c*) Minerals other than native coal.

In Victoria electric motor coaches are used for the transfer of parcels from the central stations to suburban stations, and also to convey luggage and parcels between the two main terminal stations.

12. **Passenger-Mileage and Ton-Mileage.**—(i) *Passenger-Miles.* The subjoined table gives particulars of passenger-mileage in respect of the States of New South Wales, Victoria, South Australia, and Tasmania for the years 1920–21 to 1924–25. The average

number of passengers carried per "train" is obtained by dividing the number of "passenger-miles" by the number of "passenger-train-miles." Similarly, the "density of traffic" is obtained by dividing the number of "passenger-miles" by the "average miles worked."

RAILWAYS, STATE.—SUMMARY OF "PASSENGER-MILES," 1921 TO 1925.

Year ended 30th June—	Passenger-Train-Mileage.	Number of Passenger Journeys.	Total Passenger-Miles.	Amount Received from Passengers.	Average Number of Passengers carried per Train.	Average Mileage per Passenger Journey.	Average Earnings per Passenger-Mile.	Average Fare per Passenger Journey.	Density of Traffic per Average Mile Worked.
	Miles. (,000 omitted.)	No. (,000 omitted.)	No. (,000 omitted.)	£	No.	Miles.	*d.*	*d.*	No.
NEW SOUTH WALES.									
1921	11,301	120,735	1,620,857	5,736,256	147	13.42	0.85	11.57	322,976
1922	11,379	121,299	1,610,619	5,934,616	145	13.27	0.88	11.74	320,936
1923	11,822	123,715	1,679,903	6,004,702	142	13.58	0.86	11.65	323,260
1924	12,385	128,101	1,721,161	6,076,988	139	13.44	0.85	11.39	315,216
1925	12,616	128,532	1,637,381	6,186,368	130	12.74	0.91	11.55	293,907
VICTORIA.									
1921	8,822	134,046	1,205,052	4,398,124	138	8.99	0.88	7.87	284,412
1922	9,865	142,457	1,231,828	4,814,820	125	8.65	0.94	8.11	287,777
1923	10,626	155,957	1,332,694	5,094,595	125	8.54	0.92	7.84	308,892
1924	11,140	167,862	1,421,771	5,330,614	128	8.47	0.90	7.62	325,391
1925	11,602	166,444	1,426,411	5,380,887	123	8.57	0.91	7.76	320,718
SOUTH AUSTRALIA.									
1921	2,815	23,788	280,904	1,019,480	100	11.81	0.87	10.29	120,438
1922	2,749	23,330	268,558	1,045,530	102	11.51	0.93	10.76	115,110
1923	2,833	24,481	282,387	1,078,155	100	11.54	0.92	10.57	119,718
1924	2,918	25,107	290,843	1,088,046	100	11.58	0.90	10.40	120,394
1925	3,460	25,647	302,185	1,114,558	97	11.78	0.89	10.43	123,255
TASMANIA.									
1921	494	2,688	50,263	238,719	102	18.70	1.14	21.31	78,905
1922	662	2,758	46,550	233,608	70	16.88	1.15	20.33	73,336
1923	692	2,884	46,032	228,458	67	15.96	1.19	19.01	69,388
1924	672	2,960	46,766	218,020	70	15.80	1.11	17.68	70,036
1925	654	2,656	45,126	187,701	69	16.99	0.99	16.96	67,061

The difference in the number of passenger journeys given in this table and that in connexion with traffic in respect of the State of South Australia is accounted for by the fact that the latter table is compiled from the receipts from passenger traffic, while the former is based on the passenger traffic carried.

(ii) *Ton-Miles.* Particulars regarding total " ton-miles " are given in the following table for each of the years 1920–21 to 1924–25 in respect of all States with the exception of Queensland :—

RAILWAYS, STATE.—SUMMARY OF "TON-MILES," 1921 TO 1925.

Year ended the 30th June—	Goods-Train-Mileage.	Total Tons Carried.	Total " Ton-miles."	Earnings.	Average Freight-paying Load Carried per " Train."	Average Haul per Ton.	Earnings per "Ton-mile."	Density of Traffic per Average Mile Worked.
	No. (,000 omitted.)	No. (,000 omitted.)	No. (,000 omitted.)	£	Tons.	Miles.	*d.*	Tons.
NEW SOUTH WALES.								
1921	11,491	15,262	1,418,386	6,501,914	123	92.94	1.10	282,631
1922	10,508	14,197	1,365,961	7,953,910	154	96.21	1.38	269,049
1923	9,871	13,567	1,166,238	7,868,769	160	85.96	1.60	224,417
1924	11,322	15,516	1,392,390	8,096,274	163	89.74	1.37	255,005
1925	10,689	16,027	1,647,448	9,010,929	177	102.80	1.29	295,718
VICTORIA.								
1921	6,711	7,573	727,930	4,411,276	137	96.12	1.45	171,803
1922	5,992	7,491	684,887	4,815,056	143	91.43	1.69	160,058
1923	5,768	7,517	673,904	4,953,192	145	89.65	1.76	156,198
1924	5,939	8,310	745,301	5,204,526	154	89.69	1.68	170,588
1925	5,880	8,960	847,202	5,775,522	176	94.56	1.64	190,468
SOUTH AUSTRALIA.								
1921	2,897	2,682	217,879	1,719,556	75	81.23	1.81	93,383
1922	2,881	2,828	284,269	2,000,716	99	100.53	1.68	121,253
1923	3,374	3,284	368,525	2,378,035	113	112.23	1.55	156,241
1924	3,269	3,565	384,576	2,558,706	129	107.87	1.60	159,195
1925	3,193	*a*3,611	*a*393,649	2,607,628	134	109.00	1.59	160,559
WESTERN AUSTRALIA.								
1921	2,865	2,604	200,379	1,637,979	70	76.95	1.96	56,633
1922	2,689	2,548	208,347	1,688,482	77	81.76	1.95	58,894
1923	2,659	2,624	210,151	1,768,211	93	80.08	2.02	59,164
1924	2,916	3,023	252,796	2,050,707	100	83.62	1.95	70,364
1925	3,053	3,285	277,190	2,198,322	104	84.38	1.90	75,553
TASMANIA.								
1921	893	650	33,638	302,594	38	51.78	2.15	52,807
1922	771	602	30,850	295,480	40	51.28	2.29	48,602
1923	743	547	27,297	275,968	37	49.29	2.42	41,147
1924	744	685	30,019	300,156	40	43.83	2.39	44,955
1925	726	668	29,697	292,004	41	44.45	2.36	44,133

(*a*) Based on 10 months actual and 2 months estimated.

In New South Wales the tonnage carried is exclusive of coal, on which shunting and haulage charges only have been collected, and terminal charges have also been disregarded, but in the cases of South Australia and Tasmania such charges are included. Particulars for the latter State do not include live stock.

13. Passenger Fares and Goods Rates.—Fares and rates are changed from time to time to suit the varying necessities of the railways, and when drought conditions prevail special concessions are made in the rates for the carriage of fodder and water and for the transfer of starving stock to other areas.

The preceding issue of this work (No. 18, pp. 305–6) gives detailed information as at 30th June, 1924, in regard to the following rates :—(*a*) Ordinary Passenger Mileage rates ; (*b*) Highest and Lowest Class Freight rates ; (*c*) Rates for agricultural produce. Owing to limitations of space, however, it is not proposed to republish such information unless substantial alterations are made in these rates.

14. Rolling Stock, 1925.—The following table shows the rolling stock in use at the 30th June, 1925, classified according to gauge :—

RAILWAYS, STATE.—ROLLING STOCK, 1925.

State.	Gauge.								Total.	
	5 ft. 3 in.		4 ft. 8½ in.		3 ft. 6 in.		2 ft. 6 in.	2 ft. 0 in.		
					LOCOMOTIVES.					
New South Wales	..		1,403		..		..	..	1,403	
Victoria ..	696		..		..		17	..	713	
Queensland ..	..		..		705		..	9	714	
South Australia	251		..		228		..	..	479	
Western Australia	..		..		404		..	..	404	
Tasmania ..	..		..		89		..	7	96	
All States	947		1,403		1,426		17	16	3,809	
					COACHING STOCK.					
	Ordinary.	With Motors.	Ordinary.	With Motors.	Ordinary.	With Motors.			Ordinary.	With Motors.
New South Wales	..	..	2,208	12	..	..	..	..	2,208	12
Victoria ..	2,279	376	..	..	..	..	55	..	2,334	376
Queensland ..	..	..	..	..	1,078	13	..	9	1,087	13
South Australia	496	13	..	..	221	..	..	..	717	13
Western Australia	..	..	..	..	479	3	..	..	479	3
Tasmania ..	..	..	..	..	228	4	..	6	234	4
All States ..	2,775	389	2,208	12	2,006	20	55	15	7,059	421
					STOCK OTHER THAN COACHING.					
New South Wales	..		23,758		..		..	..	23,758	
Victoria ..	19,759		..		..		243	..	20,002	
Queensland ..	..		..		16,470		..	168	16,638	
South Australia	4,709		..		5,661		..	..	10,370	
Western Australia	..		..		10,220		..	..	10,220	
Tasmania ..	..		..		1,793		..	77	1,870	
All States ..	24,468		23,758		34,144		243	245	82,858	

Prior to the issue of Year Book No. 16 (1921–22) the particulars of rolling stock were classified under the headings of "Locomotives," "Passenger Vehicles," and "Vehicles other than Passenger." The present classification has now been adopted by all States.

15. **Employees.**—The following table gives the number of railway employees in each year from 1921 to 1925 inclusive, classified according to (*a*) salaried staff, and (*b*) wages staff :—

RAILWAYS, STATE.—EMPLOYEES, 1921 TO 1925.

State.	At 30th June—									
	1921.		1922.		1923.		1924.		1925.	
	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.
New South Wales	5,257	36,481	5,302	36,037	5,356	34,271	5,473	36,127	5,672	36,455
Victoria	2,703	24,427	3,097	23,791	4,030	22,577	4,083	23,400	4,153	24,857
Queensland . .	3,524	14,598	3,458	14,862	3,250	17,621	3,298	16,380	3,362	16,522
South Australia . .	1,041	8,326	1,116	8,448	1,108	8,429	1,208	9,438	1,316	11,519
Western Australia	1,187	6,896	1,175	6,330	1,180	6,259	1,224	6,510	1,282	6,334
Tasmania . .	205	1,454	215	1,491	216	1,842	190	1,406	169	1,297
All States . .	13,917	92,182	14,363	90.959	15,140	90,999	15,476	93,261	15,954	96,984

In the period under review the totals of salaried and wages staffs rose from 106,099 in 1921 to 112,938 in 1925, an increase of 6 per cent.

16. **Accidents.**—(i) *Classification.* The following classification of accidents which occurred through the movement of rolling stock was adopted by each State in 1924–25.

RAILWAYS, STATE.—ACCIDENTS, 1925.

Particulars.	N.S.W.		Vic.		Q'land.		S. Aust.		W. Aust.		Tas.		All States.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Train accidents—														
Passengers	. .	42	. .	. .	10	36	. .	. .	1	15	. .	1	11	94
Employees	3	24	. .	1	. .	2	. .	2	. .	. .	. .	3	3	32
No. of passengers killed or injured per million carried	. .	.328	. .	. .	.337	1.213	. .	. .	.058	.872	. .	.338	.029	.254
Accidents on line (other than train accidents)—														
Passengers	5	124	7	133	7	54	4	58	1	37	. .	. .	24	406
Employees	24	209	5	103	12	50	2	58	1	50	. .	. .	44	470
Others	10	51	. .	. .	9	8	. .	. .	1	3	. .	. .	20	62
Shunting accidents—														
Passengers	. .	5	. .	. .	. .	. .	. .	. .	. .	5	. .	. .	. .	10
Employees	3	122	5	44	2	93	6	66	3	64	. .	11	19	400
Other persons	. .	. .	. .	5	. .	1	. .	1	. .	. .	. .	. .	. .	7
Employees proceeding to or from their duty within Railway boundaries . .	1	5	3	2	. .	3	. .	. .	. .	. .	. .	. .	4	10
Persons killed or injured at crossings	4	12	12	3	3	16	11	9	6	16	2	1	38	57
Trespassers	19	3	15	3	1	. .	3	4	3	5	. .	1	41	16
Miscellaneous	. .	. .	. .	4	1	20	. .	5	. .	13	. .	. .	1	42
Total	69	597	47	298	45	283	26	203	16	208	2	17	205	1,606

(ii) *Particulars for Quinquennium.* The subjoined table gives particulars of the number of persons killed and injured through train accidents and the movement of rolling stock on the Government railways in each State for each of the years 1921 to 1925 inclusive :—

RAILWAYS, STATE.—ACCIDENTS, 1921 TO 1925.

State.	In year ended 30th June—									
	1921.		1922.		1923.		1924.		1925.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales	68	554	67	467	45	498	77	526	69	597
Victoria	41	597	58	408	51	372	51	362	47	298
Queensland ..	20	554	18	564	17	563	(*a*)	(*a*)	45	283
South Australia ..	12	174	6	192	16	262	16	211	26	203
Western Australia	18	134	15	107	14	147	16	212	16	208
Tasmania ..	..	47	2	34	1	34	5	36	2	17
All States ..	159	2,060	166	1,772	144	1,876	(*b*)165	(*b*)1,347	205	1,606

(*a*) Not available. (*b*) Incomplete.

17. **Consumption of Oil and Fuel.**—The appended table shows the quantity and value of oil and fuel consumed by the various Government Railway Departments during the year 1924–25 :—

GOVERNMENT RAILWAYS.—CONSUMPTION AND VALUE OF OIL AND FUEL, 1924-25.

Government Railways.	Oil.						Coal.		
	Lubricating.			Fuel.					
	Gallons.	Value.	Average Cost per Gallon.	Gallons.	Value.	Average Cost per Gallon.	Tons.	Value.	Average Cost per Ton.
		£	*s.* *d.*		£	*s.* *d.*		£	£ *s.* *d.*
New South Wales	389,593	49,085	2 6	769,840	35,119	0 11	1,574,291	1,248,908	0 15 10½
Victoria ..	185,612	22,216	2 4½	413,099	31,698	1 9	695,910	938,542	1 6 11½
Queensland ..	250,494	23,925	1 11	194,167	14,463	1 6	447,690	442,173	0 19 9
South Australia	*a* 139,974	*a* 16,356	2 4	*b*	*b*	*b*	224,170	433,628	1 18 8
Western Australia	52,980	5,704	2 2	182,305	18,825	2 0½	272,415	267,336	0 19 7½
Tasmania ..	27,891	3,646	2 7½	10,516	790	1 6	45,192	57,683	1 5 6½
Total States	1,046,544	120,932	2 3½	*c*1,569,927	*c*100,895	*c*1 3½	3,259,668	3,388,270	1 0 9½
Federal ..	11,409	1,713	3 0	38,390	4,091	2 1½	15,698	32,964	2 2 0
Grand Total, Australia ..	1,057,953	122,645	2 4	*c*1,608,317	*c*104,986	*c*1 3½	3.275,366	3,421,234	1 0 10½

(*a*) Lubricating oil used on rolling-stock only.
(*b*) Not available.
(*c*) Exclusive of South Australia.

The range in the average cost per ton of coal from 15s. 10½d. in New South Wales to £2 2s. per ton for coal used on the Federal Railways is attributable to the comparatively low haulage expenses incurred in the coal-producing States.

§ 4. Government Railways Generally.

1. **Summary, Federal and State Government Railways.**—In the following table a summary is given of the working of all Federal and State Government railways for the year ended 30th June, 1925 :—

RAILWAYS, FEDERAL AND STATE.—SUMMARY, 1925.

Particulars.		Federal Railways.	State Railways.	Total for Australia.
Total mileage open	Miles	1,733.02	23,111.05	24,844.07
Average miles open during the year ..	,,	1,733	22,891	24,624
Total train mileage..	,,	819,881	70,954,206	71,774,087
Total cost of construction of lines open	£	11,767,971	*a*264,346,874	*a*276,114,845
Cost per mile	£	6,790	*a*11,435	*a*11,114
Gross revenue	£	409,112	44,558,352	44,967,464
Working expenses	£	497,070	32,617,013	33,114,083
Percentage of working expenses on gross revenue	%	121.50	73.20	73.64
Net revenue	£	− 87,958	11,941,339	11,853,381
Interest payable	£	272,611	12,413,778	12,686,389
Number of passenger journeys ..	No.	211,981	370,134,189	370,346,170
Tonnage of goods and live stock carried	Tons	146,511	37,838,479	37,984,990
Number of employees at 30th June, 1925—				
Salaried	No.	190	15,954	16,144
Wages	,,	1,053	96,984	98,037
Number of persons killed and injured during the year through train accidents and movement of rolling stock—				
Killed	,,	2	205	207
Injured	,,	13	1,606	1,619

(*a*) Exclusive of cost of lines from Mount Gambier to Victorian border, and from Murrayville to Victorian border.

NOTE.—(−) Denotes a loss on working.

A graph which accompanies this chapter illustrates the total capital cost, mileage open, average cost per mile open, gross revenue, working expenses, and net revenue for each of the years 1870 to 1925.

2. **Mileage Open for Traffic.**—(i) *Route Mileage.* The Government railway route mileages open for traffic, classified according to gauge, as at the 30th June in each of the years 1922 to 1925 are set out in the following table, which gives also the percentages of each mileage on the total on the mainland—the figures for Tasmania being shown separately, as in the case of the table hereinafter relating to rolling stock :—

RAILWAYS, FEDERAL AND STATE.—ROUTE MILEAGE, 1922 TO 1925.

Gauge.	At 30th June—							
	1922.		1923.		1924.		1925.	
	Miles.	%	Miles.	%	Miles.	%	Miles.	%
Mainland—								
5 ft. 3 in. ..	5,342.60	23.37	5,375.09	23.15	5,503.37	23.12	5,552.31	22.97
4 ft. 8½ in. ..	6,132.96	26.83	6,334.67	27.28	6,539.68	27.46	6,672.63	27.60
3 ft. 6 in. ..	11,233.01	49.14	11,355.71	48.91	11,615.91	48.78	11,794.20	48.79
2 ft. 6 in. ..	121.90	0.53	121.77	0.53	121.77	0.51	121.77	0.51
2 ft. 0 in. ..	30.26	0.13	30.26	0.13	30.26	0.13	30.26	0.13
Total ..	22,860.73	100.00	23,217.50	100.00	23,810.99	100.00	24,171.17	100.00
Tasmania—								
3 ft. 6 in. ..	611.97	..	638.55	..	648.07	..	648.07	..
2 ft. 0 in. ..	24.83	..	24.83	..	24.83	..	24.83	..
Grand Total	23,497.53	..	23,880.88	..	24,483.89	..	24,844.07	..

In the four years from 1922 to 1925 the percentage of 5-ft. 3-in. gauge mileage has fallen by 0.40, the 4-ft. 8½-in. has risen by 0.77, while the 3-ft. 6-in. gauge has fallen by 0.35.

(ii) *Track Mileage.* The following table gives the track mileages of all Government railways and sidings, exclusive of Tasmania, for the years ended 30th June, 1922 to 1925, classified according to gauge, together with the percentages of each mileage on the total :—

RAILWAYS, FEDERAL AND STATE.—TRACK MILEAGE (a) 1922 TO 1925.

Gauge.	At 30th June—							
	1922.		1923.		1924.		1925.	
	Miles.	%	Miles.	%	Miles.	%	Miles.	%
5 ft. 3 in. ..	6,756.56	24.81	6,930.03	25.03	7,076.24	24.76	7,167.23	24.74
4 ft. 8½ in. ..	7,923.12	29.08	8,177.04	29.54	8,424.07	29.47	8,593.18	29.66
3 ft. 6 in. ..	12,398.50	45.51	12,412.02	44.83	12,915.09	45.19	13,042.93	45.04
2 ft. 6 in. ..	131.09	0.48	131.54	0.48	131.54	0.46	131.54	0.45
2 ft. 0 in. ..	34.00	0.12	34.00	0.12	33.00	0.12	33.00	0.11
Total ..	27,243.27	100.00	27,684.63	100.00	28,579.94	100.00	28,967.88	100.00

(a) Exclusive of Tasmania.

3. **Rolling Stock.**—The numbers of the rolling stock employed on both the Federal and State Government railways are set out hereunder, classified according to gauge, as at the 30th June, 1925, together with the percentage of the numbers for each gauge on the total for the mainland. The figures for Tasmania are shown separately.

RAILWAYS, FEDERAL AND STATE.—ROLLING STOCK, 1925.

Gauge.	Locomotives.		Coaching Stock.						Vehicles other than Coaching.	
			Ordinary.		With Motors.		Total.			
	No.	%	No.	%	No.	%	No.	%	No.	%
Mainland—										
5 ft. 3 in. ..	947	27.95	2,775	40.29	389	93.28	3,164	43.32	24,468	29.84
4 ft. 8½ in. .	1,471	38.76	2,257	32.78	12	2.88	2,269	31.07	24,493	29.87
3 ft. 6 in. ..	1,351	35.60	1,790	26.00	16	3.84	1,806	24.74	32,633	39.80
2 ft. 6 in. ..	17	0.45	55	0.80	..	..	55	0.75	243	0.29
2 ft. 0 in. ..	9	0.24	9	0.13	..	..	9	0.12	168	0.20
Total ..	3,795	100.00	6,886	100.00	417	100.00	7,303	100.00	82,005	100.00
Tasmania—										
3 ft. 6 in. ..	89	..	228	..	4	..	232	..	1,793	..
2 ft. 0 in. ..	7	..	6	..	..	..	6	..	77	..
Grand Total	3,891	..	7,120	..	421	..	7,541	..	83,875	..

§ 5. Private Railways.

1. **Total Mileage Open, 1924-25.**—The bulk of the private railways in Australia have been laid down for the purpose of hauling timber, firewood, sugar-cane, coal, or other minerals, and they are not generally used for the conveyance of passengers or for public traffic. In many cases the lines are practically unballasted and easily removable.

The railways referred to herein include (*a*) lines open to the public for general passenger and goods traffic; and (*b*) branch lines from Government railways and other lines which are used for special purposes and which are of a permanent description. Other lines are referred to in the part of this chapter dealing with Tramways (see C. *Tramways*).

The following table gives particulars of private railways open for traffic for general and special purposes during 1924–25. A classification of these lines according to gauge has already been given in § 1.

RAILWAYS, PRIVATE.—MILEAGE OPEN, 1924-25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
For general traffic	143.90	24.94	289.97	33.80	277.00	191.66	961.27
For special purposes	186.74	33.89	1,029.07	16.10	577.00	39.52	1,882.32
Total ..	330.64	58.83	1,319.04	49.90	854.00	231.18	2,843.59

2. **Lines Open for General Traffic.**—The following statement gives a summary of the operations of private railways open for general traffic for the year 1925. More detailed information regarding these lines will be found in "Transport and Communication Bulletin No. 17," published by this Bureau.

RAILWAYS, PRIVATE.—SUMMARY, 1924-25.

State.	Companies from which returns were received.	Miles Open (Route).	Train-Miles.	Capital Cost.	Gross Revenue.	Working Expenses.	Rolling Stock. Locos.	Rolling Stock. Coaches.	Rolling Stock. Other Vehicles.	Passenger Journeys.	Tons of Goods, etc.	No. of Employees.
	No.	Miles.	No.	£	£	£	No.	No.	No.	No.	Tons.	No.
New South Wales	9	143.90	756,767	2,466,302	415,168	254,823	55	63	802	1,720,415	1,078,976	646
Victoria ..	2	24.94	26,572	87,059	15,743	10,763	4	4	42	35,151	80,645	25
Queensland	15	289.97	78,906	611,637	51,534	45,013	18	20	376	49,407	152,977	84
South Australia ..	1	33.80	79,622	(*a*)	(*a*)	(*a*)	7	3	162	1,622	624,776	59
Western Australia	1	277.00	259,665	2,064,750	173,743	81,407	18	20	400	58,603	128,249	214
Tasmania	6	191.66	174,351	1,265,847	107,683	84,624	26	20	412	52,761	135,815	276
All States(*b*)	34	961.27	1,375,883	6,495,595	763,871	476,630	128	130	2,194	1,917,959	2,201,438	1,304

(*a*) Not available. (*b*) Incomplete.

The particulars given in the table are incomplete in respect of the States of New South Wales, Queensland, South Australia, and Tasmania. In New South Wales and Queensland several of these lines, although owned by private companies, are operated by the Government Railway Departments, and Government rolling stock is used thereon.

§ 6. Comparative Railway Statistics, Various Countries.

In § 1.7 *ante* a table is given showing comparative railway facilities in 1924–25 in Australia.

In the appended table comparative railway statistics of a like character are given for the principal countries of the world. The dates to which the figures refer bring into relation the latest accurate figures for both population and railway mileage.

RAILWAYS, VARIOUS COUNTRIES.—MILEAGE, POPULATION, AND AREA.

Country.	Year.	Miles of Railway.	Miles of Railway— Per 1,000 of Population.	Miles of Railway— Per 1,000 Sq. Miles of Territory.
Europe—				
Great Britain and Ireland ..	1924	21,157	0.47	223.57
Belgium	1922	3,151	0.41	268.06
Denmark	1925	3,148	0.92	189.60
France	1924	25,808	0.66	121.36
Germany	1924	34,379	0.55	189.12
Greece	1923	1,470	0.25	29.45
Italy	1925	10,237	0.24	85.58
Netherlands	1924	2,405	0.23	182.09
Norway	1924	2,231	0.84	17.85
Portugal	1923	2,040	0.34	57.48
Spain	1923	9,353	0.42	48.01
Sweden	1924	9,762	1.62	56.40
Switzerland	1924	3,602	0.92	225.97
Asia—				
India	1924	38,270	0.12	21.19
Japan	1923	9,974	0.12	38.26
Africa—				
Egypt	1925	3,124	0.22	8.16
Union of South Africa	1923	10,153	1.39	21.46
America, North and Central—				
Canada	1923	41,798	4.76	11.22
Mexico	1921	13,197	0.85	17.20
United States	1924	262,380	2.48	86.66
America, South—				
Argentine	1924	22,627	2.30	19.62
Brazil	1922	18,110	0.59	5.53
Chile	1925	5,413	1.37	18.66
Australasia—				
Australia	1925	27,688	4.77	9.30
New Zealand	1925	3,204	2.32	31.02

The figures show that per 1,000 of population Australia had the greatest mileage (in 1925), 4.77 miles; the next in magnitude being Canada (1924), with 4.76 miles.

The least mileage per 1,000 of population is shown in the case of Japan (1923), with 0.119 mile, followed by India (1924), with 0.123 mile.

With regard to the mileage per 1,000 square miles of territory, Belgium (1922) with 268.06 miles was easily first, followed by Switzerland (in 1924) with 225.97 miles, and Great Britain and Ireland (1924) 223.57 miles.

The least mileage open per 1,000 square miles is that of Brazil (in 1922) with 5.53 miles, and Egypt (1925) with 8.16 miles.

C. TRAMWAYS.

1. **Systems in Operation.**—(i) *General.* Tramway systems are in operation in all the States, and in recent years considerable progress has been made in the adoption of electrical traction, the benefit of which is now enjoyed by a number of the larger towns.

In many parts of Australia private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways, and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present paragraph.

(ii) *Total Mileage Open and Classification of Lines.* The following tables show the total mileage of tramway lines open for general passenger traffic for the year 1924–25, and also in Australia as a whole for the years 1920–21 to 1924–25, classified (*a*) according to the nature of the authority by which the lines are controlled; (*b*) according to the motive power utilized, and (*c*) according to gauge :—

TRAMWAYS.—ROUTE MILEAGE OPEN, 1924-25.

Nature of Motive Power, and Gauge.	N.S. Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total, Australia.
GOVERNMENT.							
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Electric	177.14	90.09	..	..	34.28	..	301.51
Steam	51.33	..	..	..	17.75	..	69.08
Cable	..	45.58	..	..	..	..	45.58
Horse	..	..	..	..	7.39	..	7.39
Total ..	228.47	135.67	..	..	59.42	..	423.56
MUNICIPAL.							
Electric	..	..	50.33	72.20	8.61	27.75	158.89
Steam	..	..	6.65	..	..	..	6.65
Total ..	..	..	56.98	72.20	8.61	27.75	165.54
PRIVATE.							
Electric	..	27.60	..	..	14.66	..	42.26
Steam	3.50	..	..	..	..	..	3.50
Total ..	3.50	27.60	..	..	14.66	..	45.76
ALL CONTROLLING AUTHORITIES.							
Electric	177.14	117.69	50.33	72.20	57.55	27.75	502.66
Steam	54.83	..	6.65	..	17.75	..	79.23
Cable	..	45.58	..	..	..	..	45.58
Horse	..	..	..	..	7.39	..	7.39
Total ..	231.97	163.27	56.98	72.20	82.69	27.75	634.86
ACCORDING TO GAUGE.							
Gauge—							
5 ft. 3 in. ..	..	5.18	..	..	..	..	5.18
4 ft. 8½ in. ..	231.97	158.09	50.33	72.20	..	..	512.59
3 ft. 6 in. ..	..	..	6.65	..	65.31	27.75	99.71
2 ft. 0 in. ..	..	..	..	..	17.38	..	17.38
Total ..	231.97	163.27	56.98	72.20	82.69	27.75	634.86

TRAMWAYS.—ROUTE MILEAGE OPEN, AUSTRALIA, 1920-21 TO 1924-25.

Nature of Motive Power, Controlling Authority, and Gauge.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
ACCORDING TO MOTIVE POWER.					
	Miles.	Miles.	Miles.	Miles.	Miles.
Electric	445.10	456.37	460.18	482.24	502.66
Steam	97.73	98.38	93.81	85.98	79.23
Cable	45.90	45.90	45.90	45.58	45.58
Horse	8.03	7.79	8.02	7.39	7.39
Total	596.76	608.44	607.91	621.19	634.86
ACCORDING TO CONTROLLING AUTHORITY.					
Government	397.98	403.75	448.65	459.45	423.56
Municipal	104.19	110.57	113.25	115.73	165.54
Private	94.59	94.12	46.01	46.01	45.76
Total	596.76	608.44	607.91	621.19	634.86
ACCORDING TO GAUGE.					
Gauge—					
5 ft. 3 in.	5.16	5.16	5.18	5.18	5.18
4 ft. 8½ in.	486.42	495.70	490.85	499.91	512.59
3 ft. 6 in.	88.03	90.67	94.50	98.72	99.71
2 ft. 0 in.	17.15	16.91	17.38	17.38	17.38
Total	596.76	608.44	607.91	621.19	634.86

The mileage of electric tramways has steadily increased during the period dealt with above. The decrease in the Government-controlled tramways in 1925 was in some measure due to the transfer of the Brisbane tramways from the Brisbane Tramway Trust to the Brisbane City Council.

(iii) *Cost of Construction and Equipment.* The table hereunder shows, as far as information is available, the total cost of construction and equipment of all tramways to the 30th June, 1925, classified according to the nature of the motive power and the controlling authority.

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1924-25.

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
GOVERNMENT.							
	£	£	£	£	£	£	£
Electric	10,302,934	3,537,218	..	..	899,741	..	14,739,893
Steam ..	541,520	..	..	..	73,711	..	615,231
Cable ..	..	2,417,868	..	..	..	..	2,417,868
Horse ..	..	..	..	..	15,899	..	15,899
Total ..	10,844,454	5,955,086	..	..	989,351	..	17,788,891
MUNICIPAL.							
Electric	..	..	1,846,029	2,874,037	152,786	566,717	5,439,569
Steam ..	..	..	53,129	..	..	..	53,129
Total ..	..	..	1,899,158	2,874,037	152,786	566,717	5,492,698

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1924–25—*continued.*

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
			PRIVATE.				
	£	£	£	£	£	£	£
Electric	..	376,135	..	..	452,318	..	828,453
Steam ..	(*a*)	..	..	..	..	..	(*a*)
Total ..	(*a*)	376,135	..	..	452,318	..	(*b*)828,453
			ALL CONTROLLING AUTHORITIES.				
Electric	10,302,934	3,913,353	1,846,029	2,874,037	1,504,845	566,717	21,007,915
Steam ..	(*b*)541,520	..	53,129	..	73,711	..	(*b*) 668,360
Cable ..	..	2,417,868	..	..	..	..	2,417,868
Horse ..	..	..	..	..	15,899	..	15,899
Total ..	10,844,454 (*b*)	6,331,221	1,899,158	2,874,037	1,594,455	566,717	24,110,042 (*b*)

(*a*) Not available. (*b*) Incomplete.

2. **New South Wales.**—(i) *Government Tramways.* (*a*) *General.* The tramways, with some comparatively unimportant exceptions, are the property of the Government, and are under the control of the Railway Commissioners. In Sydney and suburbs the Government tramways are divided into distinct systems. There were in June, 1925, seven such systems in operation within the metropolitan area, five of which are operated by electricity and two by steam. The conversion of the Newcastle system from steam to electric traction has been undertaken, and at 30th June, 1925, 15.90 miles (route) were completed and opened for traffic.

(*b*) *Particulars of Working.* The subjoined statement gives particulars of the working of the electric and steam tramways in Sydney, and of other tramways under Government control in 1924–25 :—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—RETURNS FOR 1924-25.

Line.	Mileage Open for Traffic.		Total Cost of Construction and Equipment. (*a*)	Gross Revenue.	Working Expenses.	Net Earnings.	Interest.	Profit or Loss.	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.
	Route.	Track.								
	Miles.	Miles.	£	£	£	£	£	£	%	%
Sydney and Suburban—										
Electric	161.24	287.52	9,168,939	3,331,701	2,823,510	508,191	462,897	45,294	84.75	5.54
Steam	8.19	9.62	52,586	24,414	34,735	− 10,321	2,822	− 13,143	142.27	−19.53
Total	169.43	297.14	9,221,525	3,356,115	2,858,245	497,870	465,719	32,151	85.17	5.40
Parramatta—Steam	2.12	2.12	16,611	4,704	8,227	− 3,523	868	− 4,391	174.39	−21.21
Sutherland to Cronulla—Steam	7.40	7.40	51,891	13,829	22,789	− 8,960	2,698	− 11,658	164.79	−17.26
Newcastle										
Electric	15.90	28.74	1,133,995	113,048	86,414	26,634	42,064	− 15,430	76.44	2.25
Steam	19.50	23.21	302,363	106,841	162,928	− 56,087	28,940	− 85,027	152.50	−18.55
East to West Maitland—Steam	4.06	4.06	33,511	8,881	10,758	− 1,877	1,749	− 3,626	121.14	− 5.60
Broken Hill—Steam	10.05	10.05	84,558	15,854	25,501	− 9,647	4,451	− 14,098	160.85	− 1.14
Total	228.46	372.72	10,844,454	3,619,272	3,174,862	444,410	546,489	−102,079	87.72	4.10

(*a*) Excludes Stores Advance Account. — Indicates a loss.

(*c*) *Capital Cost.* The capital cost shown in the preceding table was made up as follows:—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—CAPITAL COST, 1925.

Permanent Way.	Rolling Stock.	Power-houses, Sub-stations, and Plant.	Machinery.	Workshops.	Furniture.	Total.
£	£	£	£	£	£	£
5,577,236	2,381,921	2,411,345	222,050	249,510	2,392	10,844,454

The average cost per mile open was £24,412 for permanent way, and £23,056 for all other charges, making a total of £47,468 per route mile.

During the year 1924–25, three new extensions, 0.73 mile in length, were opened for traffic.

(*d*) *Summary, Government Tramways.* The following table gives a summary of the operations of all Government tramways for the years 1921 to 1925 :—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—SUMMARY, 1921 TO 1925.

Year ended 30th June—	Mileage Open for Traffic. (Route.)	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest.	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.	Passengers carried.	Persons employed.
	Miles.	£	£	£	£	£	%	%	No. '000	No.
1921 ..	227.29	9,060,757*a*	3,471,737	2,943,251	528,486	421,814	84.78	5.83	337,690	9,018
1922 ..	229.26	9,505,732*a*	3,610,135	3,015,616	594,519	467,328	83.53	6.26	330,939	9,734
1923 ..	224.90	9,975,031*a*	3,598,114	3,092,306	505,808	500,274	85.94	5.08	331,002	9,897
1924 ..	227.57	10,471,958*a*	3,633,915	3,091,531	542,384	532,187	85.07	5.18	340,803	10,608
1925 ..	228.46	10,844,454*a*	3,619.272	3,174,862	444,410	546,489	87.72	4.10	339,577	10,255

(*a*) £47,455 of this sum has been paid from the Consolidated Revenue, and no interest is payable thereon.

Cost of construction and equipment for the year 1924–25 is exclusive of the amount of the Stores Advance Account (£287,000).

The net result in 1925, after providing for all working expenses and £546,489 for interest on the capital invested, was a loss of £102,079 as compared with a profit of £10,197 in the preceding year. During the year 1924–25, 339,576,776 passengers were carried, a decrease of 226,906 as compared with the previous year.

(*e*) *Sydney Tramways.* Official Year Book No. 15, p. 589, gives a short account of the progress of the Sydney Tramway System. Owing to limitations of space this information cannot be repeated, but the subjoined table shows certain important particulars for the years 1921 to 1925 inclusive.

ELECTRIC TRAMWAYS.—SYDNEY.—SUMMARY, 1921 TO 1925.

Particulars.	Year ended 30th June—				
	1921.	1922.	1923.	1924.	1925.
Mileage open for traffic—					
Route Miles	156.81	158.78	158.99	160.51	161.24
Track miles	278.75	283.07	283.28	296.10	287.52
Total cost of construction and equipment .. .. £	8,009,611	8,343,096	8,680,161	8,955,747	9,168,939
Current used for traction purposes kilowatt hours	97,193,560	99,477,210	88,655,678	96,448,720*a*	118,031,086*a*
Tram-miles run .. No.	27,112.029	27,768,543	28,562,113	30,318,516	31,238.517
Passengers carried .. No.	315,847,363	310,037,935	312,930,225	320,402,789	314,563,586
Gross revenue .. £	3,216,358	3,353,768	3,375,923	3,391,626	3,331,701
Working expenses .. £	2,649,132	2,700,686	2,759,914	2,781,148	2,823,510
Net revenue .. .. £	567,226	653,082	616,009	610,478	508,191
Percentage of working expenses on gross revenue .. %	82.36	80.53	81.75	82.00	84.75
Cars in use	1,414	1,427	1,531	1,570*a*	1,562*a*
Persons employed	8,352	9,177	9,150	10,608*a*	10,255*a*

(*a*) Includes portion of Newcastle line in process of electrification.

The current for the operation of the City and Suburban tramways is generated at the power-houses at Ultimo and White Bay, erected at a total cost of £2,411,315, including the cost of sub-stations and plant. The total output of the power-houses, for both lighting and traction purposes, during the year 1924–25 was 174,152,284 kilowatt-hours, of which the direct-current supply numbered 62,583. In addition, an output of 35,825,429 kilowatt-hours was generated at the Zarra-street (Newcastle) Power House, as compared with 28,969,176 kilowatt-hours during 1923–24.

(ii) *Private Tramways.* A private steam tramway passes through the township of Parramatta. Commencing at the park gates, it runs as far as the Duck River, a distance of 3½ miles, where it connects with the Parramatta River steamers which convey passengers and goods to and from Sydney. This line, which has a gauge of 4 ft. 8½ in., was opened for traffic in 1883. In 1925 the number of tram-miles run was 18,200, and the number of passengers conveyed 113,709.

3. **Victoria.**—(i) *General.* In Melbourne there are several tramway systems carried on under the control of various authorities, the most important being the cable and electric systems worked by the Melbourne and Metropolitan Tramways Board, to which reference will be made further on. There were also, at 30th June, 1925, two lines of electric tramways, viz. :—(*a*) St. Kilda to Brighton, and (*b*) Sandringham to Black Rock, both of which belong to and are operated by the Railways Commissioners. In addition there are systems of electric tramways at Ballarat, Bendigo, and Geelong, constructed and run by private companies.

Numerous tramways have been constructed for special purposes in various parts of the State under the provisions of the Tramway Act 1890. These, however, are of the nature of the private railways referred to in sub-section 1 hereof.

(ii) *Melbourne and Metropolitan Tramways Board.* (*a*) *General.* A short account of the formation of the Melbourne Tramway and Omnibus Company, and of the Tramways Board, will be found in earlier issues of this work.

(*b*) *Cable and Horse Tramways.* (1) *Services.* The complete system consists of 45.90 miles of double track of 4-ft. 8½-in. gauge connecting the City of Melbourne with the nearer suburbs. The service (horse-drawn) to Royal Park was abandoned in 1923.

(2) *Particulars of Working.* A summary for the years 1921 to 1925 is given hereunder :—

CABLE TRAMWAYS.—MELBOURNE.—SUMMARY, 1921 TO 1925.

Year ended 30th June—	Mileage Open (Route).			Mileage Run during Year.			Number of Passengers Carried.		
	Cable.	Horse.	Total.	Tram.		Total.	Tram.		Total.
				Cable.	Horse.		Cable.	Horse.	
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	No.	No.	No.
1921	45.90	0.63	46.53	14,058,575	10,406	14,068,981	148,755,005	293,676	149,048,681
1922	45.90	0.63	46.53	14,624,684	10,134	14,634,818	150,962,255	239,508	151,201,763
1923	45.90	0.63	46.53	14,832,416	9,808	14,842,224	155,617,351	202,802	155,820,153
1924	45.58	(*a*)	45.58	14,713,853	3,066	14,716,919	147,750,286	50,220	147,800,506
1925	45.58	(*a*)	45.58	15,285,913	..	15,285,913	148,316,398	..	148,316,398

Year ended 30th June—	Traffic Revenue.			Working Expenses.			Percentage of Working Expenses on Revenue.	No. of Employees at end of Year.
	Tram.		Total.	Tram.		Total.		
	Cable.	Horse.		Cable.	Horse.			
	£	£	£	£	£	£	%	No.
1921	1,146,955	792	1,147,747	843,333	1,100	844,433	73.60	2,836
1922	1,232,415	916	1,233,331	943,415	1,184	944,599	76.59	2,864
1923	1,260,043	869	1,260,912	923,564	1,225	924,789	73.34	3,035
1924	1,190,594	241	1,190,835	990,196	373	990,569	83.18	3,295
1925	1,192,103	..	1,192,103	1,011,630	..	1,011,630	84.86	3,136

(*a*) Line abandoned from 16th November, 1923.

(c) *Electric Tramways.* (1) *Services Operated.* The system controlled by the Melbourne and Metropolitan Tramways Board at 30th June, 1925, consisted of six services, viz., (a) The Prahran and Malvern Tramways; (b) The Hawthorn Tramways; (c) The Melbourne, Brunswick and Coburg Tramways; (d) The Fitzroy, Northcote and Preston Tramways; (e) The Footscray Tramways; and (f) the North Melbourne–Essendon Tramway, all of 4-ft. 8½-in. gauge.

(2) *Particulars of Working.* A summary of operations for the year 1924–25 is given hereunder:—

MELBOURNE TRAMWAYS BOARD.—ELECTRIC SERVICES.—OPERATIONS, 1921-22 TO 1924-25.

Year ended 30th June—	Mileage open for Traffic (Route.)	Total Cost of Construction and Equipment	Current used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Interest.	Net Profit.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	£	£
1921 ..	64.03	1,764,182	13,649,523	5,808,785	60,898,641	473,013	374,219	70,398	28,396
1922 ..	68.75	1,853,026	14,765,350	6,178,990	63,546,435	600,698	436,518	78,592	85,588
1923 ..	71.51	2,185,275	15,863,159	6,742,428	70,811,393	661,486	503,166	80,129	78,191
1924 ..	72.19	2,409,281	16,900,525	7,267,966	74,091,564	692,220	576,427	85,856	29,937
1925 ..	82.50	3,242,485	20,297,259	8,426,519	80,435,680	756,163	649,644	79,482	27,037

The total length of new track constructed during the year was 6.76 miles; this increase combined with certain conversions from cable to electrical traction was accountable for an increased mileage of 10.31 miles route (15.85 track miles) over that for 1923–24.

(iii) *Other Government Tramways.* The Victorian Railway Department owns and operates two lines of electric street railways, viz., St. Kilda to Brighton (5.18 miles of 5-ft. 3-in. gauge) and Sandringham to Black Rock (2.41 miles of 4-ft. 8½-in. gauge), a total route mileage of 7.59 miles.

Particulars of the operations of these tramways for the years 1920–21 to 1924–25 are contained in the tables hereunder.

ELECTRIC TRAMWAY.—ST. KILDA–BRIGHTON.—1921 TO 1925.

Year ended 30th June—	Total Cost of Construction and Equipment.	Current used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses	Interest.	Net Profit or Loss.
	£	Kilowatt-hours.	No.	No.	£	£	£	£
1921 ..	153,581	1,487,928	552,772	5,572,454	47,005	63,921	6,143	– 23,059
1922 ..	172,661	1,550,469	538,495	5,488,034	55,372	51,501	6,906	– 3,035
1923 ..	188,423	1,377,116	504,098	5,750,912	54,194	42,598	8,893	2,703
1924 ..	190,501	1,433,904	523,950	5,709,684	54,381	45,497	8,937	– 53
1925 ..	193,316	1,524,151	562,220	5,737,101	58,038	48,942	8,911	185

(–) Indicates loss.

ELECTRIC TRAMWAY.—SANDRINGHAM–BLACK ROCK.—1921 TO 1925.

Year ended 30th June—	Total Cost of Construction.	Current used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses	Interest.	Net Profit or Loss.
	£	Kilowatt-hours.	No.	No.	£	£	£	£
1921 ..	59,973	172,920	121,575	1,232,796	9,140	8,802	2,399	– 2,061
1922 ..	72,735	231,600	127,348	1,278,571	11,398	9,844	2,909	– 1,355
1923 ..	86,974	245,130	125,274	1,411,885	12,531	9,607	4,783	– 1,859
1924 ..	94,390	301,850	126,436	1,459,239	12,971	12,623	5,148	– 4,300
1925 ..	101,417	335,140	127,962	1,475,261	13,048	10,699	5,326	– 2,977

(–) Indicates loss.

(iv) *Private Tramways.* Two systems of tramways are owned and operated by private companies, viz., Ballarat and Bendigo (21.25 miles) and Geelong (6.35 miles); giving a total route mileage of 27.60 miles. Electrical traction is used on each of these lines which are constructed to the 4-ft. 8½-in. gauge.

(v) *Summary for all Electric Tramways.* The following table gives particulars of the working of all electric tramways in Victoria for each year from 1921 to 1925 inclusive :—

ELECTRIC TRAMWAYS.—VICTORIA.—SUMMARY, 1921 TO 1925.

Year ended 30th June—	Mileage open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1921	105.26	2,528,665	17,618,387	8,102,393	79,807,665	647,067	539,652	302	1,795
1922	109.50	2,675,023	18,755,105	8,471,039	82,444,219	790,494	585,434	309	1,836
1923	106.79	2,795,547	19,114,007	8,585,756	86,027,005	816,984	624,852	310	2,190
1924	107.47	3,046,443	20,390,335	9,192,499	88,902,067	844,189	709,293	353	2,729
1925	117.69	3,913,353	24,114,494	10,472,995	95,806,588	910,601	785,175	421	3,003

4. **Queensland.**—(i) *General.* The electric tramways in the city and suburbs of Brisbane were controlled by a private company, with head office in London, until the 31st December, 1922, on which date they were purchased by the Queensland Government which, under the provisions of the Brisbane Tramway Trust Act, 1922, appointed a Trust to control and operate the system until 1st December, 1925, on which date the control passed to the Brisbane City Council. Under the provisions of the Brisbane City Council Act, 1925, the Council took over the liabilities of the Tramway Trust to the extent of £2,000,000 which had been incurred in London, and assumed complete control of the system. The total length of the Brisbane tramways was 50.33 route miles at the end of the year 1925. A steam tramway having a length of 6.65 route miles is in operation at Rockhampton.

(ii) *Brisbane Electric Tramways.* These tramways are run on the overhead trolley system, the voltage of the line current being 550. Cost of construction and equipment to the end of the year 1925 was £1,846,029, the gauge of line being 4-ft. 8½-in. The following table gives a summary for the calendar years 1921 to 1925 :—

ELECTRIC TRAMWAYS.—BRISBANE.—SUMMARY, 1921 TO 1925.

Year ended 31st Dec.—	Mileage open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1921	42.60	1,640,127	11,413,745	4,994,357	68,056,309	544,828	411,180	178	1,142
1922	42.60	*a*1,640,127	12,143,194	5,102,527	71,529,033	575,088	446,472	181	1,179
1923	43.06	1,431,799	11,919,254	5,211,971	74,721,594	628,841	474,202	182	1,301
1924	47.13	1,615,282	12,656,077	5,457,800	78,367,194	663,747	503,131	201	1,731
1925	50.33	1,846,029	14,800,083	5,915,844	82,514,979	707,500	564,584	225	1,837

(*a*) To 31st December, 1921.

(iii) *Rockhampton Municipal Tramway.* This tramway was opened for traffic in 1909, the motive power being steam. The length of line is 6.65 route miles, and the gauge 3 ft. 6 in. The capital cost to 31st December, 1924, was £53,129. During the year 1,817,174 passengers were carried, the revenue being £17,260 and working expenses £17,010. The number of the staff at end of year was 50.

(iv) *Sugar-Mill Tramways.* In various parts of Queensland there are tramways used in connexion with the sugar-milling industry, chiefly for the purpose of hauling cane. Some of these lines are of a permanent nature, running through sugar-cane plantations, while others are portable lines running to various farms. The total length of these lines is included in the table relating to private railways given on a preceding page.

5. South Australia.—(i) *Electric Tramways.* The tramways in Adelaide and suburbs are controlled by a Municipal Tramways Trust created in 1907. Prior to this year, the system was run with horse-traction by several private companies. Electric traction was inaugurated in 1909, and at the 31st July, 1925, the Tramways Trust operated a total route mileage of 72.20 miles of 4-ft. 8½-in. gauge. A summary for the years 1921 to 1925 is given in the subjoined table :—

ELECTRIC TRAMWAYS.—ADELAIDE.—SUMMARY, 1921 TO 1925.

Year ended 31st July—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1921	66.40	1,890,067	12,096,515	5,785,148	55,323,737	555,421	392,824	190	1,264
1922	69.45	2,190,147	12,542,540	5,960,082	56,787,339	580,505	405,230	198	1.287
1923	71.71	2,512,048	13,700,385	6,155,033	59,648,362	612,839	430,474	218	1,422
1924	73.83	2,742,985	15,705,191	6,568,985	61,737,665	638,277	463,481	231	1,583
1925	72.20	2,874,037	18,456,574	7,222,292	63,152,810	640,335	467,751	249	1,563

(ii) *Horse Tramways.* There are also 19.86 miles of Government horse-tramways in country districts, worked in connexion with the railway system, of which 17.36 miles are used for passenger service, and 2.50 miles for special purposes.

6. Western Australia.—(i) *Government Tramways.* (*a*) *General.* Apart from the electric tramways, there are several Government tramways, with a total length of 25.14 miles. The lines are under the control of the Department of the North-West, and the most important is that between Roebourne and Cossack, constructed on a 2-ft. gauge, with a length of 12.50 miles, and worked by steam. The remaining 12.64 miles are made up of several short lengths worked by steam or horses in connexion with the jetties at certain ports, and providing communication between the jetties and the goods sheds or warehouses.

(*b*) *Steam and Horse Tramways.* The capital cost of the Government steam or horse tramways up to the 30th June, 1925, was £89,610, the gross revenue for 1924–25 being £4,399, and the working expenses £2,632.

(*c*) *Perth Electric Tramways.* These tramways were opened for traffic by a private company on the 24th September, 1899, and the system was subsequently extended to many of the suburbs. Control was taken over by the Government on the 1st July, 1913, and the tramways are now worked in conjunction with the Government railways. The gauge of line is 3 ft. 6 in. The following table shows particulars of working for the years ended 30th June, 1921 to 1925 :—

ELECTRIC TRAMWAYS.—PERTH.—1920-21 TO 1924-25.

Year ended 30th June—	Mileage open for Traffic.	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
		£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1921 ..	27.40	654,047	6,386,640	3,552,550	25,753,113	224,892	204,459	83	556
1922 ..	26.73	779,081	6,666,050	2,644,725	25,042,689	248,463	209,104	103	645
1923 ..	30.38	850,965	7,285,200	2,770,518	25,993,983	262,689	213,928	103	551
1924 ..	34.24	879,277	8,061,920	2,989,089	27,893,315	274,583	231,895	103	529
1925 ..	34.28	899,741	8,296,746	3,040,505	28,894,525	281,612	236,008	113	566

(ii) *Private Tramways.* Electric tramways with a route mileage at 31st August, 1925, of 8.61 miles, and controlled by the municipal authorities, are in operation in Fremantle. In Kalgoorlie and Boulder a private company controls the electric tramways, and at the end of 1925 the length of line was 14.66 miles (route). All the foregoing lines are of 3-ft. 6-in. gauge.

(iii) *Summary, all Electric Tramways.* The subjoined table gives a summary for all electric tramway systems in the State for the years 1921 to 1925:—

ELECTRIC TRAMWAYS.—WESTERN AUSTRALIA.—SUMMARY, 1921 TO 1925.

Year.	Mileage open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram. Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1921	50.90	1,227,304	8,412,175	3,472,632	33,377,124	313,195	276,607	136	728
1922	50.38	1,364,177	8,745,935	3,540,886	32,954,755	338,353	277,971	160	826
1923	53.81	1,442,094	9,326,907	3,637,126	33,838,351	350,412	281,566	166	722
1924	57.67	1,477,033	10,117,198	3,939,689	36,484,855	360,883	301,920	160	702
1925	57.55	1,504,845	10,389,250	3,975,699	37,237,791	365,156	306,378	173	751

7. **Tasmania.**—(i) *Electric Tramways.* In Hobart there is a system of electric tramways consisting of 16.50 route miles of 3-ft. 6-in. gauge controlled by the Hobart Municipal Council. The Launceston City Council operates tramways in Launceston having a length of 11.25 miles of 3-ft. 6-in. gauge.

The following table gives a summary of the working of the two systems for the years 1921 to 1925:—

ELECTRIC TRAMWAYS.—TASMANIA.—SUMMARY, 1921 TO 1925.

Year.	Mileage open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1921	23.13	443,872	2,610,504	1,428,696	14,766,819	142,500	108,684	67	428
1922	25.64	490,476	2,697,680	1,504,634	15,315,969	155,129	122,622	68	448
1923	26.28	517,983	3,447,310	1,747,974	16,499,999	177,057	132,011	74	438
1924	26.64	541,941	3,439,420	1,890,882	17,683,824	192,772	144,841	82	430
1925	27.75	566,717	3,510,994	1,886,231	17,725,007	180,345	137,002	90	399

(ii) *Other Tramways.* There are several lines of privately-owned steam tramways. These are dealt with in § 5, Private Railways, as they do not come within the category of street tramways for the conveyance of passengers.

8. **Electric Tramways, Australia.**—(i) *Summary for 1925.* The subjoined table gives details regarding all electric tramways in Australia. The returns for tramways in Ballarat and Bendigo, in Brisbane, in Kalgoorlie, and in Hobart are for the calendar year 1925; for other tramways they refer generally to the financial year 1924–25.

ELECTRIC TRAMWAYS.—AUSTRALIA.—SUMMARY, 1924-25.

State.	Mileage open for Traffic (Route).	Total Cost of Construction and Equipment.	Current used for Traction purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Percentage of Working Expenses on Gross Revenue.	Cars, Motors and Trailers.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	%	No.	No.
N.S.W. ..	177.14	10,302,934	118,031,086	32,468,795	325,254,810	3,444,749	2,909,924	84.47	1,562	10,255
Victoria..	117.69	3,913,353	24,114,494	10,472,995	95,806,588	910,601	785,175	86.23	421	3,003
Q'land ..	50.33	1,846,029	14,800,083	5,915,844	82,514,979	707,500	564,584	79.81	225	1,837
S. Aust...	72.20	2,874,037	18,456,574	7,222,292	63,152,810	640,335	467,751	73.05	249	1,563
W. Aust.	57.55	1,504.845	10,389.250	3,975,699	37,237 791	365,156	306,378	83.90	173	751
Tasmania	27.75	566,717	3,510,994	1,886,231	17,725,007	180,345	137,002	75.97	90	399
All States	502.66	21,007,915	189,302,481	61,941,856	621,691,985	6,248,686	5,170,814	82.75	2,720	17,808

The percentage of working expenses on gross revenue for all electric tramways in Australia was 82.75, ranging from 73.05 in the case of South Australia to 86.23 in the case of Victoria.

(ii) *Summary for Years 1921 to 1925.* The following table gives particulars of the operations of electric tramways in Australia for the years 1921 to 1925 :—

ELECTRIC TRAMWAYS.—AUSTRALIA.—1921 TO 1925.

Particulars.	1921.	1922.	1923.(*a*)	1924.	1925.
Mileage open for Traffic (Route) Miles	445.10	456.35	460.18	482.24	502.66
Total Cost of Construction and Equipment .. .. £	15,239,646	16,703,046	17,587,960	19,206,509	21,007,915
Current used for Traction Purposes .. .. Kil. hrs.	149,344,886	154,361,664	146,387,481	158,756,941	189,302,481
Tram-miles run .. .. No.	50,895,255	52,347,711	53,790,529	57,725,334	61,941,856
Passengers carried .. .. ,,	567,179,017	569,067,250	580,472,975	606,673,314	621,691,985
Gross Revenue .. .. £	5,419,369	5,703,337	5,908,303	6,123,275	6,248,686
Working Expenses .. .. £	4,378,079	4,538,415	4,675,289	4,930,302	5,170,814
Percentage of Working Expenses on Gross Revenue .. .. %	80.78	78.33	79.13	80.51	82.75
Cars, Motors and Trailers .. No.	2,287	2,343	2,487	2,598	2,720
Persons Employed .. .. ,,	13,709	14,753	15,101	17,783	17,808

(*a*) Includes Queensland for the year ended 31st December, 1922.

During the five years included in the above table the percentage of working expenses on the gross revenue of all electric tramways in Australia reached a maximum of 82.75 in 1925, after a steady increase from a minimum of 78.33 which was recorded in 1922, the average over the whole period being 80.58.

D. AIRCRAFT.

1. **General.**—A short review of the progress of civil aviation in Australia up to the date of foundation of the Department of Civil Aviation was given in Official Year Book No. 16, pp. 334–5, but limitations of space preclude its repetition in the present volume.

2. **Foundation of Civil Aviation Department.**—In December, 1920, the Commonwealth Parliament passed the Air Navigation Act, the objects of which were :—(*a*) To carry out the provisions of the Convention on Air Navigation, signed in Paris on the 13th October, 1919 : (*b*) to apply the principles of the Convention not only to international flying, but to internal flying in Australia, and generally to legislate by regulation on the subject matter.

Regulations were drawn up under this Act to provide, *inter alia*, for the registration and periodical inspection of aircraft, licensing of aerodromes, examination and licensing of personnel engaged in flying and in upkeep of machines, prohibition of trick flying, rules of the air, etc. Penalties are prescribed for breaches of these regulations.

The date of commencement of the Act was fixed by proclamation as the 28th March, 1921, and the Regulations, issued in the previous month, came into force on the same date.

A Controller of Civil Aviation was appointed on the 16th December, 1920, to administer the Act and Regulations.

3. **Activities of Civil Aviation Department.**—(i) *Aerodromes and Landing Grounds.* Amongst the earliest activities were the acquisition and preparation of civil aviation landing grounds, which have now been established over the following approved routes :—(*a*) Perth to Derby (1,442 miles) ; (*b*) Adelaide to Sydney (790 miles) ; (*c*) Sydney to Brisbane (550 miles) ; (*d*) Charleville to Camooweal (Queensland), 825 miles ; (*e*) Melbourne to Hay (233 miles) ; and (*f*) Mildura to Broken Hill (189 miles).

Facilities for landing have also been provided on the route from Melbourne to Charleville, via Cootamundra, Narromine, Bourke, and Cunnamulla ; and from Derby to Wyndham, via Fitzroy Crossing, Hall's Creek, and Ord River Downs.

Preliminary surveys of the following routes also have been made, but no expenditure has yet been incurred in the preparation of landing grounds in connexion therewith :—(a) Melbourne to Perth (2,000 miles) ; (b) Adelaide to Port Lincoln, via Yorke Peninsula (for seaplanes), (200 miles) ; and (c) Melbourne to Launceston via (1) Flinders Island and North-East coast of Tasmania (293 nautical miles), and (2) via King Island and North-West Coast (299 nautical miles).

The Royal Australian Air Force has surveyed and prepared for use a service route from Camooweal to Port Darwin, via Anthony's Lagoon, Newcastle Waters, and Katherine.

Up to the present 133 landing grounds have been acquired or leased, and prepared for civil aviation purposes. There are 11 private licensed aerodromes also in use.

(ii) *Aerial Services.* (a) *General.* In addition to providing a regular and speedy transport service over fixed routes, it was considered that the granting of contracts for subsidized aerial services would give an impetus to the development of civil aviation in Australia, while the trained flying and ground personnel would provide a technical reserve for air defence in case of war.

At 30th June, 1925, three subsidized contractors were operating under contracts which provided that 100 lb. of mail is to be carried free on each trip, the letters for transmission being surcharged 3d. per ½ ounce.

The various regular air services over prepared routes have completed 1,000,000 passenger miles without fatal or serious injury to a paying passenger.

All pilots and mechanics employed on these services must join the Air Force Reserve when the Reserve is constituted.

(b) *Aerial Mail Services.* Up to the present, tenders have been accepted for the following :—

(1) *Perth to Derby—Western Australia.*

This service, covering a distance of 1,442 miles, is carried out by the Western Australian Airways Limited. Landing places for mails are—Perth, Geraldton, Carnarvon, Onslow, Roebourne, Whim Creek, Port Hedland, Broome, and Derby.

The extended service from Perth to Derby, the subsidy for which was at the rate of £30,000 per annum during 1924 and 1925, but was reduced to approximately £24,500 for 1926, was inaugurated on the 17th January, 1924, and the machines now fly 2,884 miles each week, leaving Perth on Thursdays, and returning on Tuesdays. With the exception of a serious accident at its inception, this service has been carried on successfully, and the facilities it has provided have been readily availed of by the residents. The number of letters carried during the first month's operations was 577, but it has increased to about 20,000 per month.

(2) *Charleville to Camooweal—Queensland.*

This service is operated by the Queensland and Northern Territory Aerial Services Limited. The route covers 825 miles, and links up the western terminals of three main railway lines in Western Queensland, viz., Charleville, Longreach, and Cloncurry. The landing places for mails are—Charleville, Tambo, Blackall, Longreach, Winton, McKinlay, Cloncurry, Mt. Isa, and Camooweal.

The original contract which provided for a weekly (return) service between Charleville and Cloncurry commenced on 2nd November, 1922, and annual renewals of the contract were made until 2nd November, 1925, when an agreement for 3 years was entered upon. Consequent on the extension to Camooweal, the subsidy, which was at the rate of £12,000 per annum until 7th February, 1925, was increased to £17,000 per annum.

The service has been maintained successfully, and is greatly appreciated by residents of Western Queensland and the Northern Territory. Passenger bookings have shown a steady increase since the service was instituted.

(3) *Adelaide, Sydney, Cootamundra and Branches, and Sydney–Brisbane Services.*

Contracts were accepted in 1921 for the maintenance of weekly return aerial services between Adelaide and Sydney, 790 miles, and Sydney and Brisbane, 550 miles, for a period of twelve months, with subsidies of £17,500 and £11,000 respectively.

Owing to various causes, delays occurred in the commencement of the services, and it was not until 2nd June, 1924, that the contractors (Larkin Aircraft Supply Co.) commenced operations, which were confined to the Adelaide–Sydney section.

A number of new four-seater passenger machines was placed in commission in November, 1924, and the service—once weekly in each direction—has since been regularly maintained.

This service was maintained until 19th July, 1925, when a further agreement was completed with the Company who, under a 3 years' contract carrying a subsidy at the rate of £29,500 per annum, began operations over the following routes on 21st July, 1925 :—(*a*) Adelaide–Cootamundra, via Mildura, Hay, and Narrandera (578 miles). Service, once weekly in each direction ; (*b*) Broken Hill–Mildura (189 miles). Service, twice weekly in each direction ; and (*c*) Melbourne–Hay, via Echuca (233 miles). Service, twice weekly in each direction.

The first-mentioned service is regarded as the main trunk route, and the others as branches connecting at Mildura and Hay respectively. Passengers to and from Sydney establish connexion between aeroplane and train at Cootamundra, the time-tables being so arranged as to allow of this procedure.

(4) *Future Services.*

In addition to the services referred to in the previous issue of the Year Book (No. 17, p. 333), proposals have been submitted to the Department for the operation of the following services :—(*a*) From Fremantle to Adelaide ; (*b*) from Camooweal to Brunette ; and (*c*) from Melbourne to Launceston.

(iii) *Experimental Work.* An important stage in aircraft development in Australia was reached with the successful completion of the official tests of a flying boat designed by Squadron Leader E. J. Wackett, D.F.C., A.F.C., R.A.A.F. This machine, known as the " Widgeon," was ordered by the Civil Aviation Department, embodies a number of features specially designed for local conditions, and, with the exception of the engine, was wholly built at the R.A.A.F. workshops. The maximum speed attained was 103 m.p.h. with an initial climbing rate of 510 feet per minute, while the total gross weight of machine with passengers (680 lb.) and fuel (380 lb.) was 3,960 lb.

4. Training of Air Pilots.—(i) *Flying Training Courses.* The pre-existing practice of selecting civilian applicants for training as pilots with Civil Aviation Companies was discontinued during 1925, vacancies now occurring being reserved for members of the R.A.A.F., four of whom were selected for a special training course in 1925.

Pending absorption as pilots with Civil Aviation Companies when they receive free discharges from the R.A.A.F., successful graduates revert to their ordinary training.

(ii) *Refresher Courses.* Qualified pilots who are employed or about to be employed in commercial aviation enterprises are accepted on the recommendation of the Controller of Civil Aviation for short refresher courses of flying instruction at the Flying Training School, Point Cook. No charge is made for this refresher instruction, the cost of which is also borne by Royal Australian Air Force Funds.

(iii) *Light Plane Clubs.* Associations which have been formed in Sydney and Melbourne under the auspices of the New South Wales and Victorian Aero Clubs will afford facilities to their members to acquire flying instruction and practice at a considerably lower cost than was possible prior to the advent of the light (or low-powered) aeroplane.

Assistance to the following extent is being provided each section by the Commonwealth Government :—(*a*) The loan of two De Haviland " Moth " aeroplanes with spare engines and parts ; (*b*) Bonus of £20 per pupil trained (*ab initio*) to a standard that will enable the pupil to obtain a " Private Pilot's " Licence ; (*c*) Free hangar accommodation and free use of aerodrome for clubs' activities ; and (*d*) Technical supervision by Departmental Resident Ground Engineer.

Although in the interim only the two sections referred to are receiving assistance as indicated, proposals which have been received from commercial aviation concerns for the formation of similar organizations in important country centres are under consideration.

5. **Statistical Summary.**—The collection and compilation of aircraft statistics were undertaken by the Commonwealth Bureau of Census and Statistics on the 1st July, 1922. The subjoined table gives a summary of operations in each State for the year ended 30th June, 1925, together with comparative figures for Australia for the year 1923–24 :—

AIRCRAFT.—SUMMARY, 1923-24 AND 1924-25.

Particulars.	State in which Aeroplanes are Located.					Total.	
	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	1924–25.	1923–24.
Companies or persons owning aircraft .. No.	4	7	6	2	4	23	26
Aeroplanes .. No.	5	26	14	2	12	59	51
Staff employed(*a*)—							
Certificated pilots No.	3	10	4	1	7	25	27
Others .. .. No.	3	29	12	1	27	72	57
Flights carried out .. No.	721	1,598	1,134	372	1,068	4,893	4,354
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
Hours flown ..	276 45	1,495 12	1,218 03	104 10	2,208 34	5,302 44	3,703 27
Approx. mileage miles	19,915	117,385	94,177	8,340	164,603	404,420	269,909
Passengers carried—							
Paying .. .. No.	856	632	975	477	723	3,663	3,453
Non-paying .. No.	217	1,601	9	207	394	2,428	1,308
Total .. No.	1,073	2,233	984	684	1,117	6,091	4,761
Goods, weight carried lbs.	..	6	3,675	..	7,451	11,132	8,456
Mails, letters carried No.	..	2,435	14,093	..	208,600	225,128	174,691
Accidents involving—							
Injuries to personnel No.	..	..	..	..	1	1	1
Damage to aircraft No.	..	2	2	2	2	8	6
Persons killed .. No.	..	..	..	..	1	1	..
,, injured .. No.	..	..	..	..	3	3	1

(*a*) Monthly average.

As compared with the results for 1923–24, the number of hours flown and mileage traversed increased by 43 per cent. and 50 per cent. respectively, while both the poundage of goods and the number of letters carried increased by approximately 30 per cent.

E. MOTOR VEHICLES.

1. **Registration.**—The arrangements for the registration of motor vehicles and the licensing of drivers and riders thereof are not uniform throughout Australia. Methods of registration, licences, fees payable, etc., in each State were referred to in Official Year Book No. 16, pp. 337–340, and later issues, but limits of space preclude the repetition of this information in the present volume.

2. **Public Vehicles.**—In all the capital cities of the States and in many of the most important provincial centres taxi-cabs and other vehicles ply for hire under licence granted either by the Commissioner of Police or the Local Government authority concerned. In addition, there is a considerable number of motor omnibuses operating between the capital cities and their suburbs. As most of these omnibuses are independently controlled by individuals or small companies, it has not been possible to obtain complete data in respect of their operations. Arrangements have, however, been made for the collection of this information.

3. **Motor Vehicles Registered, etc.**—(i) *Year 1924–25.* Particulars of the registration of motor vehicles, etc., for the year 1924–25 are contained in the subjoined table :—

MOTOR VEHICLES.—SUMMARY, 1924-25.

State.	Motor Vehicles Registered.				Drivers' and Riders' Licences Issued.	Revenue derived from—		
	Motor Cars.	Motor Cycles.	Commercial Vehicles.	Total.		Vehicle Registrations and Motor Tax.	Drivers' and Riders' Licences.	Total.
	No.	No.	No.	No.	No.	£	£	£
New South Wales ..	71,610	20,062	16,267	107,939	161,893	548,042	56,432	604,474
Victoria	70,041	19,212	(*a*)150	89,403	100,021	395,986	18,067	414,053
Queensland	31,614	4,805	(*b*)2,000	38,419	12,254	143,776	4,327	148,103
South Australia ..	30,381	7,872	(*b*)4,665	42,918	(*c*)	135,616	(*c*)	135,616
Western Australia ..	11,845	3,447	(*b*)2,180	17,472	24,500	65,349	6,125	71,474
Tasmania	5,844	2,650	(*b*)829	9,323	11,328	37,883	3,522	41,405
Northern Territory ..	106	31	25	162	154	20	35	55
All States ..	221,441	58,079	*e*26,116	305,636	310,150	1,326,672	*d*88,508	1,415,180

(*a*) Motor buses. Trucks, vans, etc., included with motor cars. (*b*) Motor lorries. (*c*) Not available, records destroyed by fire. Revenue included with Registrations and Motor Tax. (*d*) Exclusive of South Australia. (*e*) Incomplete.

South Australia with 7.90 motor vehicles per 100 of population shows the best record, Victoria with 5.35 was next in importance, with Tasmania and Northern Territory lowest with 4.40 and 4.30 respectively, the average for the Commonwealth being 5.15.

(ii) *Quinquennium 1921–1925.* The following table shows the number of vehicles registered, licences issued, and revenue received therefrom during each of the years 1920–21 to 1924–25 :—

MOTOR VEHICLES.—REGISTRATIONS, ETC., 1920-21 TO 1924-25.

Year.	Motor Vehicles Registered.				Drivers' and Riders' Licences Issued.	Revenue derived from—		
	Motor Cars.	Motor Cycles.	Commercial Vehicles.	Total.		Vehicle Registration and Motor Tax.	Drivers' and Riders' Licences.	Total.
						£	£	£
1920–21	87,071	35,759	(*a*)	122,830	(*b*)	(*b*)	(*b*)	(*b*)
1921–22	99,270	37,578	(*a*)	136,848	161,903	(*b*)	(*b*)	476,559
1922–23	116,658	42,649	(*c*)13,438	172,745	208,376	575,198	44,249	619,447
1923–24	168,568	52,717	(*c*)18,056	239,341	296,177	801,701	62,001	863,702
1924–25	221,441	58,079	(*c*)26,116	305,636	310,150	1,326,672	88,508	1,415,180

(*a*) Included with Motor Cars. (*b*) Not available. (*c*) Incomplete, partly included with Motor Cars.

During the period dealt with the number of motor vehicles per 100 of population rose from 2.25 in 1920–21 to 5.15 in 1924–25. The growth in revenue received during 1924–25 is due mainly to increased registration fees and motor tax.

4. **Motor Omnibuses.**—Motor omnibus traffic, both in urban and provincial areas, has assumed considerable proportions in Australia during recent years, and allusion has been made in preceding pages to the effect of this means of transport on railway and tramway finances.

Existing and contemplated legislation provide for the allocation by Boards of routes and the basing of licence fees generally on the seating capacity and tyre equipment of the vehicles concerned. It is hoped thereby to obviate the economic waste arising from duplication of routes and services parallel with or contiguous to existing railway and tramway systems. Revenue from licence fees is to be devoted principally to the maintenance or construction of roadways to enable them to withstand the wear and tear involved by the heavy traffic.

A considerable amount of city and country goods transport is now being carried on by motor vehicles, and they are being largely made use of by the railway departments as adjuncts to their goods services.

Statistics regarding motor omnibus operations are, however, not at present available, but the question of obtaining such information is under consideration.

5. **Comparative Motor Vehicle Statistics, 1925.**—The following statement, which has been extracted from the issue of "The Automotive Manufacturer" of February, 1926, shows the number of motor cars and trucks, and motor-cycles in several of the most important countries of the world. The figures are in some instances approximate, being based on estimates supplied by Trade Commissioners or representative motor trade organizations in the various countries.

COMPARATIVE MOTOR VEHICLE STATISTICS, 1925.

Country.	Motor Cars and Trucks.	Motor Cycles.
Australia	247,557	58,079
Argentine	178,050	3,200
Belgium	92,713	28,460
Brazil	63,650	..
Canada	715,962	7,920
Cuba	37,650	..
Denmark	60,320	18,800
France	735,000	120,000
Germany	323,000	216,829
India	69,127	14,200
Italy	114,700	70,000
Mexico	37,824	..
Netherlands	56,300	40,000
Netherlands East Indies	38,050	7,000
New Zealand	96,348	24,000
Union of South Africa	69,350	25,000
Spain	76,000	9,000
Sweden	81,600	23,000
Great Britain	903,021	571,552
United States of America	19,946,997	119,274

The estimated total number of motor-vehicles in 1925, as disclosed by the publication referred to, was 24,520,998 cars and trucks, and 1,475,010 motor-cycles.

The figures quoted for Australia have been compiled from data supplied by the responsible registration authorities in the several States, and differ slightly from those contained in "The Automotive Manufacturer."

F. POSTS, TELEGRAPHS AND TELEPHONES.

§ 1. Posts.

1. **The Commonwealth Postal Department.**—In previous issues of the Year Book some account was given of the procedure in connexion with the transfer to the Federal Government of the postal, telegraphic, and telephonic facilities of the separate States. (See Year Book No. 15, p. 601.)

Under the provisions of the Commonwealth Post and Telegraph Act, 1901, the Commonwealth Postal Department was placed under the control of a Postmaster-General, a responsible Minister with Cabinet rank, and of a Secretary having chief control of the Department under the Postmaster-General, whilst a principal officer in each State was provided for under the style of Deputy Postmaster-General.

2. **Postal Matter Dealt With.**—(i) *Australia.* The following table gives a summary of the postal matter dealt with in Australia during the five years 1921 to 1925. Although mail matter posted in Australia for delivery therein is necessarily handled at least twice, only the numbers dispatched are included in the table following, which consequently gives the number of distinct articles handled.

POSTAL MATTER DEALT WITH.—AUSTRALIA, 1920-21 TO 1924-25.

Year ended 30th June—	Letters and Post-cards.		Newspapers.		Packets.		Parcels.		Registered Articles.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.
POSTED WITHIN AUSTRALIA FOR DELIVERY THEREIN.										
1921 ..	512,021	94,603	117,824	21,770	47,567	8,789	6,633	1,226	5,664	1,046
1922 ..	507,239	91,099	126,165	22,659	56,622	10,169	8,284	1,488	5,516	991
1923 ..	535,596	94,161	136,137	23,934	73,267	12,881	9,158	1,610	5,766	1,014
1924 ..	579,679	99,883	143,429	24,714	93,575	16,124	9,387	1,617	5,959	1,027
1925 ..	616,804	114,027	151,484	25,548	106,089	17,892	10,615	1,790	6,147	1,037
OVERSEA RECEIVED.										
1921 ..	35,804	6,615	8,931	1,650	2,440	451	371	69	415	77
1922 ..	30,912	5,552	9,770	1,755	2,674	480	339	61	410	74
1923 ..	32,961	5,795	10,274	1,806	2,891	508	437	77	453	79
1924 ..	34,708	5,980	13,662	2,354	4,273	736	447	77	475	82
1925 ..	40,911	6,900	14,824	2,500	5,262	887	446	75	475	80
OVERSEA DISPATCHED.										
1921 ..	21,519	3,976	4,128	763	1,402	259	188	35	305	57
1922 ..	23,822	4,278	4,542	816	1,299	233	176	32	286	51
1923 ..	25,722	4,522	4,734	832	1,671	294	183	32	303	53
1924 ..	29,016	5,000	5,681	979	2,283	393	190	33	341	59
1925 ..	34,328	5,790	6,839	1,153	2,617	441	169	28	388	65
TOTAL POSTAL MATTER DEALT WITH BY THE COMMONWEALTH POSTAL DEPARTMENT.										
1921 ..	569,344	105,194	130,883	24,183	51,409	9,499	7,192	1,330	6,384	1,180
1922 ..	561,973	100,929	140,477	25,230	60,595	10,882	8,799	1,581	6,212	1,116
1923 ..	594,279	104,478	151,145	26,572	77,829	13,683	9,778	1,719	6,522	1,146
1924 ..	643,403	110,863	162,772	28,047	100,131	17,253	10,024	1,727	6,775	1,168
1925 ..	692,043	126,717	173,147	29,201	113,968	19,220	11,230	1,893	7,010	1,182

(ii) *States.* The next table shows separately for each State the postal matter dealt with in 1924–25 under the classification adopted in the preceding paragraph, with the exception of registered articles, which are dealt with separately hereinafter. The returns given for South Australia in this and all succeeding tables include those for the Northern Territory, while the returns for the Federal Capital Territory are included in those for New South Wales.

POSTAL MATTER DEALT WITH.—STATES, 1924-25.

State.	Letters and Post-cards.		Newspapers.		Packets.		Parcels.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.
POSTED FOR DELIVERY WITHIN AUSTRALIA.								
New South Wales	260,906	114,613	64,120	28,167	47,559	20,892	4,843	2,127
Victoria ..	177,065	105,972	37,987	22,735	15,382	9,206	2,325	1,391
Queensland ..	69,371	81,115	27,353	31,984	18,170	21,246	1,847	2,160
South Australia	49,455	90,429	8,085	14,784	14,667	26,819	801	1,465
Western Australia	31,689	86,105	6,118	16,624	5,821	15,817	619	1,682
Tasmania ..	28,318	133,635	7,821	36,908	4,490	21,189	180	849
Australia ..	616,804	114,027	151,484	25,548	106,089	17,892	10,615	1,790
OVERSEA RECEIVED.								
New South Wales	14,318	6,289	5,096	2,238	1,829	803	170	75
Victoria ..	18,486	11,064	4,756	2,846	1,069	640	128	77
Queensland ..	2,459	2,875	2,419	2,829	752	879	54	63
South Australia	2,368	4,330	811	1,483	511	934	33	60
Western Australia	2,424	6,586	1,503	4,084	704	1,913	48	130
Tasmania ..	856	4,040	239	1,128	397	1,873	13	61
Australia ..	40,911	6,900	14,824	2,500	5,262	887	446	75
OVERSEA DISPATCHED.								
New South Wales	18,508	8,130	3,495	1,535	1,811	795	90	40
Victoria ..	8,324	4,982	2,085	1,248	413	247	44	26
Queensland ..	2,166	2,535	501	586	122	143	14	16
South Australia	1,910	3,492	254	464	90	165	9	16
Western Australia	1,761	4,785	258	701	37	101	10	27
Tasmania ..	1,659	7,829	246	1,161	144	680	2	9
Australia ..	34,328	5,790	6,839	1,153	2,617	441	169	28

3. **Postal Facilities.**—(i) *Relation to Area and Population.* The subjoined statement shows the number of post and receiving offices, the area in square miles and the number of inhabitants to each post office (including receiving offices) in each State and in Australia at the end of the year 1924–25. In order to judge clearly the relative postal facilities provided in each State, the area of country to each office, as well as the number of inhabitants per office, should be taken into account.

POSTAL FACILITIES.—RELATION TO AREA AND POPULATION, 30th JUNE, 1925.

State.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
Number of post and receiving offices	2,664	2,708	1,287	807	720	514	8,700
Number of square miles of territory to each office in State	116	32	521	1,120	1,355	51	342
Number of inhabitants to each office	854	617	665	678	511	412	682
Number of inhabitants per 100 square miles	734	1,901	128	60	38	808	199

The foregoing table does not include "telephone" offices at which telegraph and telephone business only is transacted.

(ii) *Number of Offices.* The following table shows the number of post and receiving offices in each year from 1920–21 to 1924–25 inclusive :—

POST AND RECEIVING OFFICES AT 30th JUNE, 1921 TO 1925.

State.	At 30th June—									
	1921.		1922.		1923.		1924.		1925.	
	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.
New South Wales	2,031	578	2,032	556	2,040	559	2,059	584	2,063	601
Victoria	1,712	864	1,721	855	1,736	859	1,774	898	1,785	923
Queensland ..	658	604	665	576	678	567	694	565	743	544
South Australia ..	670	127	666	139	667	137	669	136	675	132
Western Australia	405	222	414	254	426	306	445	401	465	255
Tasmania ..	409	89	413	90	413	106	428	114	411	103
Australia ..	5,885	2,484	5,911	2,470	5,960	2,534	6,069	2,698	6,142	2,558

(iii) *Employees and Mail Contractors.*—The number of employees and mail contractors in the Central Office and in each of the States is given in the appended table :—

POSTAL EMPLOYEES AND MAIL CONTRACTORS, 1921 TO 1925.

State.	At 30th June—									
	1921.		1922.		1923.		1924.		1925.	
	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.
Central Office ..	(*a*)139	..	87	..	95	..	100	..	110	..
New South Wales	11,669	2,046	12,451	2,087	13,255	1,732	13,947	1,791	14,413	1,915
Victoria	8,117	1,091	8,553	1,095	9,148	1,124	10,279	1,133	11,140	1,139
Queensland ..	4,728	750	4,792	766	4,978	810	6,220	819	6,322	839
South Australia ..	2,826	439	2,895	441	3,227	422	4,014	354	3,926	430
Western Australia	2,111	302	2,200	338	2,450	339	2,450	382	3,271	319
Tasmania ..	1,220	223	1,229	236	1,321	202	1,582	206	1,551	243
Australia ..	30,810	4,851	32,207	4,963	34,474	4,629	38,592	4,685	40,733	4,885

(*a*) Includes "radio staff."

4. Registered Letters, Packets, etc.—Particulars regarding registered articles for the year 1924–25 are given in the table hereunder :—

REGISTERED ARTICLES POSTED AND RECEIVED, 1924-25.

State.	Posted in each State for Delivery within Australia.		Posted in each State for Delivery Overseas.		Total Posted.		Received in each State from Overseas.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.
New South Wales ..	2,292	1,007	163	72	2,455	1,078	212	93
Victoria	1,707	1,022	112	67	1,819	1,089	125	75
Queensland ..	915	1,070	47	55	962	1,125	47	55
South Australia ..	503	920	25	46	528	965	30	55
Western Australia..	479	1,302	37	101	516	1,402	51	139
Tasmania ..	251	1,184	4	19	255	1,203	10	47
Australia ..	6,147	1,037	388	65	6,535	1,102	475	80

5. Value-Payable Parcel and Letter Post.—(i) *General.* The Postal Department undertakes to deliver registered articles sent by parcel post within Australia, or between Papua or Nauru and Australia, to recover from the addressee on delivery a specified sum of money fixed by the sender, and to remit the sum to the sender by money order, for which the usual commission is charged. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, also to meet the requirements of traders and others who do not wish their goods to be delivered except on payment.

(ii) *Summary of Business.* The next statement gives particulars regarding the value-payable post in each State for the years 1921 to 1925 :—

VALUE-PAYABLE PARCELS POST.—SUMMARY, 1921 TO 1925.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
NUMBER OF PARCELS POSTED.							
	No.	No.	No.	No.	No.	No.	No.
1921	53,829	3,192	120,045	689	36,125	155	214,035
1922	93,621	4,092	171,848	606	48,187	111	318,465
1923	134,703	5,329	207,162	1,604	56,572	113	405,483
1924	165,360	6,421	225,040	2,456	63,393	292	462,962
1925	209,265	8,397	199,752	3,559	69,065	387	490,425
VALUE COLLECTED.							
	£	£	£	£	£	£	£
1921	124,502	6,105	177,662	2,027	57,170	711	368,177
1922	172,258	8,086	238,047	1,694	81,370	444	501,899
1923	237,209	10,826	279,508	2,485	87,508	439	617,975
1924	277,087	11,310	364,965	3,406	101,515	715	758,998
1925	347,902	15,440	331,280	5,728	108,193	1,055	809,598

VALUE-PAYABLE PARCELS POST.—SUMMARY, 1921 TO 1925—*continued.*

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
REVENUE, INCLUDING POSTAGE, COMMISSION ON VALUE, REGISTRATION AND MONEY ORDER COMMISSION.							
	£	£	£	£	£	£	£
1921	8,502	446	16,102	103	4,966	32	30,151
1922	12,144	549	22,214	177	6,259	47	41,390
1923	18,586	667	29,602	248	7,365	52	56,520
1924	23,026	855	30,318	263	8,277	42	62,781
1925	31,324	1,138	27,176	469	9,208	53	69,368

The number and value of parcels forwarded in New South Wales and Queensland are greatly in excess of the transactions of any of the other States, although the system has also found favour for several years in Western Australia. The amount of business transacted in Victoria, South Australia, and Tasmania is comparatively light, but in each of the past five years there has been a considerable increase.

6. **Sea-borne Mail Services.**—(i) *Summary.* In earlier issues of this work statements regarding the development of the principal sea-borne mail services were included but owing to the restrictions of space this information cannot be repeated. The following tabular summary, however, contains information in respect of sea-borne mail services as at 1st April, 1926 :—

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES, 1926.

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
1. *To and from Ports in New South Wales*—			
(i) N.S. WALES—Q'LAND	Weekly	Sydney and Brisbane ..	Poundage rates
(ii) NORTHERN PORTS— (*a*) North Coast S.N. Co.	Once weekly	Sydney and Clarence River, Byron Bay, and Richmond River	,, ..
(*b*) ,, ,,	Fortnightly	Sydney and South Solitary Island	.. ..
(iii) SOUTH COAST PORTS— Illawarra and S. Coast S.N. Co.	Fortnightly	Sydney, Montague Island	,, ,,
2. *To and from Northern Ports of Queensland*—			
(*a*) Hayles Magnetic Island Limited	Weekly	From Cairns to Cooktown via Port Douglas	Subsidized from 6th December, 1924, for three years. Amount of subsidy, £2,678 per annum.
(*b*) Other steamers	Irregularly	Various	Poundage rates

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES—*continued.*

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
3. *To and from Ports in South Australia*—			
(*a*) Coast Steamship Co. Ltd.	Weekly	Port Adelaide and Kingscote	Subsidized to 31st December, 1928. Amount of subsidy, £1,000
(*b*) Adelaide Steamship Co. ..	Weekly	Port Adelaide and Port Lincoln	Subsidized for three years from 1st January, 1923. Amount of subsidy, £3,000
(*c*) Adelaide Steam Tug Co. ..	As required	Port Pirie and Whyalla	Subsidized without agreement. Amount of subsidy, £120
(*d*) Coast Steamships Ltd. ..	Fortnightly	Port Adelaide to Streaky Bay	Poundage rates
(*e*) ,, ,, ,, ..	Weekly (Thursdays)	Port Adelaide to Kingscote	,, ,,
(*f*) McIlwraith, McEacharn Line	Monthly	Port Adelaide to Albany	,, ..
4. *Western Australia*—			
(i) TO AND FROM PORTS ON N.W. COAST—			
(*a*) State Shipping Service	Monthly	Fremantle and Derby ..	Subsidized by agreement dated 28th February, 1913, for three years. Later extended to a date three months after expiration of war. Subsequently extended for indefinite period. Amount of subsidy, £5,500
(*b*) ,, ,, ,,	Once each sixty days	Fremantle and Darwin	
(*c*) West Australian S.N. Co.	About fortnightly	Fremantle and Singapore via N.W. Ports	Poundage rates
(*d*) State Shipping Service	Irregularly, during the cattle season	Fremantle, Derby, Wyndham, Java and Singapore	,, ,,
(ii) TO AND FROM PORTS ON S. COAST—			
(*a*) State Shipping Service	Fortnightly	Albany and Esperance	Subsidized by agreement for three years, dating from 1st August, 1924. Amount of subsidy, £1,500
(*b*) ,, ,, ,,	Quarterly	Albany and Eucla, via intermediate ports	
5. *Tasmania*—			
(*a*) Tasmanian Steamers Pty Ltd.	Three times a week summer; twice a week winter	Melbourne and Launceston	Subsidy, £30,000 per annum from 1st May, 1921, under contract for twelve months, and thereafter terminable on twelve months' notice by either party to the agreement
(*b*) ,, ,, ,,	Twice a week	Melbourne and Burnie	
(*c*) Union S.S. Co. and Huddart Parker Ltd.	Weekly	Sydney, Hobart and Wellington	Poundage rates
(*d*) Union Steamship Co. ..	,,	Sydney, Launceston, and Devonport	,, ,,
(*e*) Shipping and Trading Agency Pty Ltd.	,,	Launceston	,, ,,
(*f*) ,, ,, ,,	,,	Melbourne, Launceston	,, ,,
(*g*) ,, ,, ,,	,,	Melbourne, Burnie, etc.	,, ,,
(*h*) Huon Channel and Peninsular Co.	Thrice a week	Hobart and Kelly's Point, via Pearson's Point	Subsidized by agreement dated 1st January, 1925, for three years. Amount of subsidy, £50 per annum
(*i*) The Commissioner, Tasmanian Government Railways	Every two weeks	Launceston and Furneaux Group of islands	Subsidized by agreement dated 1st January, 1925, for three years. Amount of subsidy, £375 per annum
(*j*) ,, ,, ,,	Fortnightly	Launceston and Currie, King Island	Subsidized by agreement dated 1st January, 1925, for three years. Amount of subsidy, £400 per annum
(*k*) Holyman and Sons Pty. Ltd.	Weekly	Burnie and Melbourne, via Fraser River and King Island	Poundage rates

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES—*continued.*

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
6. *To and from Northern Territory*—			
(*a*) Burns, Philp and Co. ..	Monthly	To and from Adelaide, Melbourne, and Sydney, via Queensland ports	Poundage rates
(*b*) State Steamship Service of Western Australia	Once each sixty days	Fremantle and Darwin..	See Item 4 (*b*)
7. *To and from New Zealand*—			
(*a*) Conjointly by Union S.S. Co. and Huddart, Parker Ltd.	Weekly	Sydney and Wellington; Sydney and Auckland	Poundage rates
(*b*) Other steamers ..	Irregularly, when convenient	Sydney, Wellington, Auckland, Lyttelton, and other Ports	,, ,,
(*c*) ,, ,, ..	About every three weeks	Melbourne, Wellington, or Bluff	,, ,,
8. *Pacific Islands*—			
(*a*) Burns, Philp and Co. ..	Every five weeks	Sydney to Lord Howe and Norfolk Islands and New Hebrides	Subsidized by Commonwealth Government
(*b*) ,, ,, ..	Irregularly	Sydney to Nauru and Ocean Islands, Gilbert and Ellice Groups	,, ,,
(*c*) ,, ,, ..	,,	Sydney to Marshall Islands	,, ,,
(*d*) ,, ,, ..	Monthly	Sydney to Papua, via Queensland Ports	,, ,,
(*e*) ,, ,, ..	Every three weeks	Sydney to Rabaul, via Brisbane	,, ,,
(*f*) ,, ,, ..	Twice in six weeks	Sydney to Solomon Islands, via Queensland Ports	,, ,,
9. *New Caledonia and New Hebrides*—			
(*a*) Messageries Maritimes ..	Monthly	Sydney and Noumea and to Vila (New Hebrides)	Postal Union rates
(*b*) Other steamers ..	About twice a month	Sydney and Noumea ..	Poundage rates
10. *Fiji, Friendly Islands, and Samoa*—			
(*a*) Union S.S. Co. ..	Every four weeks	Sydney and Suva ..	,, ,,
(*b*) ,, ,, ..	,,	Sydney, Suva, Tonga, and Samoa	,, ,,
(*c*) A.U.S.N. Co.	,,	Sydney and Suva ..	,, ,,
(*d*) Oceanic S.S. Co. ..	Every three weeks	Sydney, Suva, and Samoa	,, ,,
11. *To Eastern Ports*—			
(*a*) Burns, Philp and Co. ..	Monthly	Melbourne and Sydney to Java and Singapore, via Queensland Ports and Darwin	Subsidized by Commonwealth Govt., Mails at poundage rates
(*b*) Aust.-Oriental; Eastern and Ausn. Line	About once a month	Melbourne and Sydney to Hong Kong, Manila, etc., via Queensland Ports	Poundage rates
(*c*) Nippon Yusen Kaisha ..	Every four weeks	Melbourne and Sydney to Manila, China, and Japan, via Queensland Ports	Postal Union rates
(*d*) Royal Dutch Packet S.N. Co.	Monthly	Melbourne to Java and Singapore, via Sydney and Queensland Ports	Poundage rates
(*e*) Various other steamers	About monthly	Sydney or Newcastle and ports in Borneo, Java, Sumatra, Japan, and Malay Peninsula	,, ,,
(*f*) W.A.S.N. Co. ..	About fortnightly	W.A. Ports, Java, and Singapore	,, ,,
(*g*) Austral East Indies Line of steamers	Monthly	Sydney, Melbourne, Adelaide, Fremantle, Java, and Singapore	,, ,,
(*h*) Ellerman Bucknall Line	,,	,, ,, ,,	,, ,,
12. *South Africa*— White Star, P. and O. Branch Service, and other Companies	Irregularly	Sydney, Melbourne, Adelaide, and Fremantle to Durban and Capetown	,, ,,

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES—*continued.*

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
13. *To and from Europe, via Suez—*			
(*a*) Orient Steam Navigation Co.	Every four weeks	Brisbane, Sydney, Melbourne, Adelaide, Fremantle, and London, via Suez	Subsidy, £130,000. Commenced 20th September, 1921. Terminable on twelve months' notice by either party
(*b*) Peninsular and Oriental S.N. Co. Ltd.	Every four weeks	Sydney, Melbourne, Adelaide, Fremantle, and London, via Suez	Postal Union rates
(*c*) Commonwealth Government Line of Steamers	About every four weeks	,, ,, ,,	Poundage rates
14. *To and from Europe, via Vancouver—*			
(*a*) Canadian-Aust. Line	Every four weeks	Sydney and Vancouver, B.C., via Auckland, Fiji, Honolulu	,, ..
15. *To and from Europe, via San Francisco—*			
(*a*) Union Steamship Company	Every four weeks	Sydney, Wellington, Raratonga, Tahiti, and San Francisco	Subsidized by New Zealand Govt.. Mails from Aust. at Postal Union rates
(*b*) Oceanic Steamship Co...	Every three weeks	Sydney, Suva, Pago Pago (Samoa), Honolulu, and San Francisco	Poundage rates
16. *North America—*			
(*a*) Union S.S. Co.	Every four weeks	Sydney, Wellington, Tahiti, and San Francisco	,, ,,
(*b*) Canadian-Aust. Line ..	,,	Sydney, Auckland, Fiji, Honolulu, and Vancouver	,, ,,
(*c*) Oceanic S.S. Co. ..	Every three weeks	Sydney, Suva, Pago Pago (Samoa), Honolulu, and San Francisco	.. ..
17. *South America—*			
(*a*) { Oceanic S.S. Co. Union S.S. Co. }	Thrice a month	Sydney, via San Francisco to ports in Chile, Brazil, Peru, Uruguay, and Argentine	,, ..
(*b*) Various other steamers	Irregularly	Via Newcastle and Sydney to various ports	,, ,,

(ii) *Average and Fastest Time of Mails to and from London.* (*a*) *Via Suez Canal.*

The subjoined table shows the average and the fastest times occupied in the conveyance of mails from London to Fremantle and vice versa during the year 1924–25 :—

AVERAGE AND FASTEST TIME.—MAILS VIA SUEZ CANAL, LONDON TO FREMANTLE, AND VICE VERSA DURING 1924-25.

Period.	London to Fremantle.				Fremantle to London.			
	Average Time.		Fastest Time.		Average Time.		Fastest Time.	
	Days.	Hours.	Days.	Hours.	Days.	Hours.	Days.	Hours.
9.3.25 to 25.2.26	25	14	24	12¼	26	11	25	9½

(*b*) *Via America.* The average and fastest times occupied in the conveyance of mails between London and Sydney via America during 1924–25 were :—

AVERAGE AND FASTEST TIME.—MAILS VIA AMERICA, DURING 1924-25.

Service.		Average Time.		Fastest Time.	
		Days.	Hours.	Days.	Hours.
London to Sydney	via Vancouver	43	—	43	—
	via San Francisco (Oceanic) ..	34	18	34	—
Sydney to London	via Vancouver	37	—	36	—
	via San Francisco (Oceanic) ..	35	4	33	—

(iii) *Amount of Mail Subsidies Paid.* The following table shows the amounts of subsidies paid by the Commonwealth Postal Department for ocean and coastal mail services during the year ended 30th June, 1925 :—

MAIL SUBSIDIES.—OCEAN AND COASTAL SERVICES, 1924-25.

Service.	Orient S.N. Co.	Queensland Ports.	South Australian Ports.	Western Australian Ports.	Tasmanian Ports.
	£	£	£	£	£
Annual subsidy	130,000	7,860	5,320	5,453	29,080

During the year 1924–25 the amount paid for conveyance of mails at poundage rates by non-contract vessels was £35,147 ; by road services, £636,958 ; and by railway services, £403,843. The total expenditure in 1925 on the carriage of mails, as disclosed by the Profit and Loss Account, amounted to £1,284,991.

7. **Transactions of the Dead Letter Offices.**—The table hereunder shows the number of letters, postcards and letter-cards, and packets and circulars, including Inland, Inter-State, and International, dealt with by the Dead Letter Offices in 1924–25, and the methods adopted in the disposal thereof :—

DEAD LETTER OFFICES.—SUMMARY, 1924-25.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
LETTERS, POSTCARDS, AND LETTERCARDS.							
Returned direct to writers or delivered	830,794	383,902	222,225	90,105	139,691	65,598	1,732,315
Destroyed in accordance with Act ..	86,308	75,368	28,410	14,987	10,498	5,472	221,043
Returned to other States or Countries as unclaimed	51,530	30,421	22,089	9,220	15,703	2,052	131,015
Total	968,632	489,691	272,724	114,312	165,892	73,122	2,084,373
PACKETS AND CIRCULARS.							
Returned direct to writers or delivered	845,707	197,026	221,305	56,978	76,616	12,438	1,410,070
Destroyed in accordance with Act ..	183,539	150,405	25,087	47,780	395	156	407,362
Returned to other States or Countries as unclaimed	1,961	20,360	9,018	3,620	595	3,678	39,232
Total	1,031,207	367,791	255,410	108,378	77,606	16,272	1,856,664
Grand Total (letters, packets, etc.)	1,999,839	857,482	528,134	222,690	243,498	89,394	3,941,037

During the year 1924–25 money and valuables to the amount of £146,863 were found in undeliverable postal articles, while 18,100 postal articles were posted without address, including 346 which contained money and valuables to the extent of £2,612.

8. **Money Orders and Postal Notes.**—(i) *General.* The issue of money orders and postal notes is regulated by sections 74 to 79 of the Post and Telegraph Act, 1901. A money order may be issued for payment of sums up to £20 within Australia, and not exceeding £40 (in some cases £20, and in Mauritius £10) in places abroad. A postal note which is payable only within Australia and in Papua, cannot be issued for a larger sum than twenty shillings.

(ii) *Summary for States, 1924–25.* Particulars regarding the business transacted in each State for the year 1924–25 are given hereunder :—

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, 1924-25.

State.	Value of Money Orders Issued.	Value of Money Orders Paid.	Net Money Order Commission Received.	Value of Postal Notes Sold.	Poundage Received on Postal Notes.
	£	£	£	£	£
New South Wales ..	6,616,991	6,818,695	43,925	1,935,353	37,896
Victoria	3,087,546	3,208,709	21,004	1,447,297	28,796
Queensland ..	2,529,285	2,116,360	16,242	512,615	10,052
South Australia ..	985,964	868,397	6,697	325,705	6,654
Western Australia ..	1,358,192	1,192,254	9,171	276,676	5,329
Tasmania	577,684	523,773	3,944	136,317	2,758
Australia ..	15,155,662	14,728,188	100,983	4,633,963	91,485

The figures in the foregoing table show a substantial increase over the corresponding particulars for the previous year.

(iii) *Summary, Australia, 1921 to 1925.* The next table shows the total number and value of money orders and postal notes issued and paid in Australia from 1920–21 to 1924–25 :—

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, AUSTRALIA, 1920-21 TO 1924-25.

Year ended 30th June—	Money Orders.				Postal Notes.			
	Issued.		Paid.		Issued.		Paid.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
	No. (,000).	£ (,000).	No. (,000).	£ (,000).	No. (,000).	£ (,000).	No. (,000).	£(,000).
1921 ..	2,543	13,675	2,439	13,181	10,849	3,674	10,821	3,671
1922 ..	2,761	13,803	2,632	13,412	11,631	3,968	11,522	3,909
1923 ..	2,873	14,121	2,724	13,706	12,512	4,160	12,455	4,148
1924 ..	2,832	14,377	2,686	13,913	13,382	4,350	13,240	4,311
1925 ..	2,976	15,155	2,835	14,728	13,437	4,634	13,370	4,616

(iv) *Classification of Money Orders Issued and Paid.* (*a*) *Orders Issued.* The next table shows the number and value of money orders issued in each State during the year 1924–25, classified according to the country where payable :—

MONEY ORDERS ISSUED.—COUNTRY WHERE PAYABLE, 1924-25.

State in which Issued.	Where Payable.				Total.
	In Australia.	In New Zealand.	In the United K'dom.	In Other Countries.	
			Number.		
New South Wales ..	1,238,014	11,194	81,466	15,165	1,345,839
Victoria	524,006	6,764	54,315	12,887	597,972
Queensland	419,400	1,973	28,535	9,986	459,894
South Australia ..	171,617	1,006	17,366	6,911	196,900
Western Australia ..	226,834	1,000	20,297	3,662	251,793
Tasmania	114,772	1,530	5,725	1,416	123,443
Australia ..	2,694,643	23,467	207,704	50,027	2,975,841
			Value.		
	£	£	£	£	£
New South Wales ..	6,249,588	50,048	244,392	72,963	6,616,991
Victoria	2,836,903	27,257	159,979	63,407	3,087,546
Queensland	2,355,427	8,692	90,318	74,848	2,529,285
South Australia ..	886,603	4,235	48,357	46,769	985,964
Western Australia ..	1,269,299	4,891	67,078	16,924	1,358,192
Tasmania	554,595	6,509	13,187	3,393	577,684
Australia ..	14,152,415	101,632	623,311	278,304	15,155,662

(*b*) *Orders Paid.* The number and value of money orders paid in each State during the year 1924–25, classified according to the country where issued, are given hereunder :—

MONEY ORDERS PAID.—COUNTRY OF ISSUE, 1924-25.

State in which Paid.	Where Issued.				Total.
	In Australia.	In New Zealand.	In the United K'dom.	In Other Countries.	
			Number.		
New South Wales ..	1,257,756	40,107	16,426	11,681	1,325,970
Victoria	583,235	20,826	11,245	5,029	620,335
Queensland	379,588	2,786	5,487	2,722	390,583
South Australia ..	169,131	1,279	3,152	1,207	174,769
Western Australia ..	205,900	1,880	5,364	1,744	214,888
Tasmania	102,318	2,969	1,480	1,822	108,589
Australia ..	2,697,928	69,847	43,154	24,205	2,835,134
			Value.		
	£	£	£	£	£
New South Wales ..	6,503,401	164,184	90,988	60,122	6,818,695
Victoria	3,059,280	72,009	52,990	24,430	3,208,709
Queensland	2,067,425	11,541	26,808	10,586	2,116,360
South Australia ..	843,216	6,055	12,767	6,359	868,397
Western Australia ..	1,151,186	6,177	26,721	8,170	1,192,254
Tasmania	502,295	9,800	5,999	5,679	523,773
Australia ..	14,126,803	269,766	216,273	115,346	14,728,188

In the tables above, money orders payable or issued in foreign countries which have been sent from or to Australia through the General Post Office at London are included in those payable or issued in the United Kingdom.

(v) *Classification of Postal Notes Paid.* The subjoined table shows the number and value of postal notes paid during the year 1924–25, classified according to the State in which they were issued.

Particulars regarding the total number and value of postal notes issued and paid in each of the last five years have been given previously.

POSTAL NOTES PAID.—STATE OF ISSUE, 1924-25.

Particulars.	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
NUMBER.							
Issued in same State	3,878,661	2,796,744	1,183,770	647,466	647,051	309,083	9,462,775
Issued in other States	485,708	381,525	714,851	66,201	31,496	2,227,393	3,907,174
Total ..	4,364,369	3,178,269	1,898,621	713,667	678,547	2,536,476	13,369,949
VALUE.							
	£	£	£	£	£	£	£
Issued in same State	1,476,859	998,214	413,442	212,038	237,222	99,115	3,436,890
Issued in other States	176,329	142,718	203,296	26,819	12,619	616,896	1,178,677
Total ..	1,653,188	1,140,932	616,738	238,857	249,841	716,011	4,615,567

The number and value of postal notes paid in Australia during the year showed an increase of 1 and 7 per cent. respectively over the corresponding figures for the year 1923–24.

9. **Gross Revenue, Postmaster-General's Department.**—(i) *Total.* The following table shows the gross revenue of the Postmaster-General's Department for the years ended 30th June, 1921 to 1925 inclusive. In the postal branch is included the revenue derived from money-order commissions, poundage on postal notes, private boxes and bags, and miscellaneous sources. The figures are supplied by the Treasury, and represent the actual collections and payments for the periods mentioned :—

GROSS REVENUE, POSTMASTER-GENERAL'S DEPT., 1921 TO 1925.

Year ended 30th June—	Postal Branch.	Telegraph Branch.	Telephone Branch.	Total.
	£	£	£	£
1921	4,574,618	(*a*)1,381,974	2,431,981	8,388,573
1922	5,194,523	(*b*)1,401,583	2,724,554	9,320,660
1923	5,395,829	(*c*)1,413,375	2,983,069	9,792,273
1924	5,024,816	(*d*)1,430,554	3,301,651	9,757,021
1925	4,944,546	(*e*)1,500,076	3,599,864	10,044,486

Includes radio receipts (*a*) £12,052, (*b*) £25,998, (*c*) £7,711, (*d*) £4,012, and (*e*) £18,292.

As compared with the corresponding figures for the previous year, an increase of 2.94 per cent. is shown. The figures for the Telegraph and Telephone Branches increased by 4.86 and 9.03 per cent. respectively, while the Postal Branch showed a decrease of 1.60 per cent., as compared with a decrease for the previous year of 6.88 per cent.

(ii) *Analysis for States.* Returns for the year ended 30th June, 1925, are given below :—

GROSS REVENUE, POSTMASTER-GENERAL'S DEPT., ANALYSIS, 1924-25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
Postage	1,718,010	1,230,737	638,006	360,251	251,381	135,076	4,333,461
Telegraphs (ordinary)	526,921	329,505	241,918	205,166	126,682	51,592	1,481,784
Telegraphs (radio)	9,470	6,135	408	1,117	981	181	18,292
Telephones ..	1,397,289	1,033,242	486,073	384,528	198,875	99,857	3,599,864
Money order commission .. Poundage on postal notes	82,025	49,175	27,112	13,277	14,500	6,720	192,809
Private boxes and bags	18,119	10,598	11,287	6,526	3,606	2,165	52,301
Miscellaneous ..	129,206	112,478	47,616	26,011	38,960	11,704	365,975
Total ..	3,881,040	2,771,870	1,452,420	996,876	634,985	307,295	10,044,486

Increased telephone revenue (£299,213) was mainly responsible for a total increase of £287,474 over the revenue for 1923–24.

10. **Expenditure, Postmaster-General's Department.**—(i) *Total.* The next table gives the actual payments made as shown by records kept for Treasury purposes in respect of the Postal Department for each of the years ended 30th June, 1921 to 1925 inclusive.

EXPENDITURE, POSTMASTER-GENERAL'S DEPT., 1921 TO 1925.

Expenditure.	Year ended 30th June—				
	1921.	1922.	1923.	1924.	1925.
	£	£	£	£	£
Total	8,268,725	10,026,593	10,752,373	13,487,891	14,887,929

(ii) *Distribution.* The following table shows, as far as possible, the distribution of expenditure on various items in each State during the year ended 30th June, 1925. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc., are included therein.

EXPENDITURE, POSTMASTER-GENERAL'S DEPT.—DISTRIBUTION, 1924-25.

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Salaries and contingencies—	£	£	£	£	£	£	£	£
Salaries ..	39,695	2,120,286	1,438,088	788,000	526,474	406,452	195,865	5,514,860
Conveyance of mails	..	442,412	239,415	227,841	87,118	91,616	42,213	1,130,615
Contingencies ..	7,802	718,825	501,435	426,807	237,009	140,437	90,224	2,122,539
Ocean mails ..	130,000	..	..	..	..	..	..	130,000
Miscellaneous ..	1,147	22,923	21,844	5,475	8,291	5,313	5,357	70,350
Pensions and retiring allowances ..	..	36,572	49,476	200	..	9,680	..	95,928
Rent, repairs, maintenance ..	640	61,289	31,001	21,175	11,712	11,992	5,022	142,831
Supervision of works	..	521	382	193	125	84	50	1,355
Proportion of Audit Office expenses ..	..	4,086	2,999	1,511	981	659	394	10,630
Unforeseen expenditure	..	14	53	3	2	2	4	78
New works—								
Telegraph and telephone ..	4,110	1,269,952	1,030,482	702,624	655,339	245,384	75,815	3,983,706
New buildings, etc.	..	221,704	109,951	79,101	89,991	41,581	10,958	553,286
Interest on transferred properties ..	..	80,469	43,241	32,026	19,922	16,460	7,124	199,242
Other	*a*932,509	..	..	..	..	..	..	932,509
Total ..	1,115,903	4,979,053	3,468,367	2,284,956	1,636,964	969,660	433,026	14,887,929

(*a*) Particulars of appointment to each State not available.

Compared with the total for the preceding year the expenditure for 1924–25 rose by £1,400,038, the principal increase being in respect of salaries and contingencies, £768,280, and works, £385,096.

11. Balance Sheet of the Postmaster-General's Department.—(i) *General.* Returns for the last five years are given below :—

PROFITS, POSTMASTER-GENERAL'S DEPT., 1921 TO 1925.

Items.	Year ended 30th June—				
	1921.	1922.	1923.	1924.	1925.
	£	£	£	£	£
Total earnings ..	8,511,494	9,347,656	9,898,158	9,724,801	10,074,854
Total working expenses	6,724,543	7,103,536	7,651,864	8,448,777	9,230,630
Surplus	1,786,951	2,244,120	2,246,294	1,276,024	844,224
Interest on capital ..	643,183	703,039	780,235	911,672	1,086,546
Total surplus (+) or deficit (−) ..	+1,143,768	+1,541,081	+1,466,059	+364,352	− 242,322

After providing for depreciation, pensions and retiring allowances, the year 1924–25 closed with a surplus of £844,224, which was insufficient by £242,322 to meet the interest on capital. In each of the previous four years a surplus resulted, but in respect of the year 1924–25 the following factors contributed to the altered financial aspect :—Reduced revenue due to reduction of postage rates from 1st October, 1923, estimated at £300,000 ; the introduction of the radial charge basis for telephone trunk calls (£82,000) ; the alteration of cable rates from 1st December, 1924 (£17,500) ; and the diminution of the earnings from the Orient (Contract) Line of Steamers estimated at £47,000. Further, the additional amount involved in Arbitration Court awards (£283,000) ; the increase of £62,000 for Railway Mail Services ; and the re-arranging and rebuilding of telephone and telegraph aerial routes between Melbourne and Sydney, for which £45,000 was debited to working expenses for the year, all tended to an adverse financial balance on the year's operations.

(ii) *Results for each State.* The next table gives the results for each State during the five years 1920–21 to 1924–25 :—

PROFIT OR LOSS, POSTMASTER-GENERAL'S DEPT., STATES, 1921 TO 1925.

State.	Year ended 30th June—				
	1921.	1922.	1923.	1924.	1925.
	£	£	£	£	£
New South Wales	(+) 334,395	(+) 508,474	(+) 487,835	(+) 90,815	(−) 42,459
Victoria.. ..	(+) 516,860	(+) 644,824	(+) 608,203	(+) 311,709	(+) 91,974
Queensland ..	(+) 143,844	(+) 186,185	(+) 168,172	(−) 7,734	(−) 102,298
South Australia ..	(+) 189,936	(+) 218,528	(+) 226,155	(+) 106,306	(+) 22,142
Western Australia	(−) 62,397	(−) 30,764	(−) 22,638	(−) 87,677	(−) 126,796
Tasmania ..	(+) 21,130	(+) 13,834	(−) 1,668	(−) 49,067	(−) 84,885
Australia ..	(+)1,143,768	(+) 1,541,081	(+) 1,466,059	(+) 364,352	(−) 242,322

(+) Denotes profit. (−) Denotes loss.

(iii) *Profit or Loss of Branches.* The following table shows the profit or loss on the various branches during the five years dealt with :—

PROFIT OR LOSS, BRANCHES, POSTMASTER-GENERAL'S DEPT., 1921 TO 1925.

Year ended 30th June—	Postal.		Telegraph.		Telephone.		All Branches.	
	Loss.	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.	Profit.
	£	£	£	£	£	£	£	£
1921 ..	..	929,605	8,312	..	..	222,475	..	1,143,768
1922 ..	..	1,258,286	..	1,809	..	280,986	..	1,541,081
1923 ..	..	1,365,064	78,460	..	..	179,455	..	1,466,059
1924 ..	..	502,667	188,982	..	..	50,667	..	364,352
1925 ..	..	243,472	227,175	..	258,619	..	242,322	..

The losses for the year, which were incurred in the Telegraph and Telephone Branches, are ascribed to reasons in para. 11 (i) hereinbefore.

§ 2. Telegraphs.

1. **General.**—A review of the development of the Electric Telegraph Services in Australia was given in a previous issue of this work (see Year Book No. 15), but limitations of space preclude the repetition of this information in the present issue. The two most important developments in connexion with the Telegraph system are the introduction of the "Carrier-wave" system referred to hereinafter (see § 4, Telephones) and the "Teletype Printing Telegraphs," 15 sets of which apparatus will shortly be installed on various circuits throughout Australia.

2. **Telegraph Offices, Length of Lines and Wire.**—(i) *Summary for Australia.* The following table shows the number of telegraph offices and the length of telegraph lines and of telegraph wire available for use in Australia in each year from 1921 to 1925 :—

TELEGRAPHS.—AUSTRALIA, SUMMARY, 30th JUNE, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
Number of offices	6,366	6,641	6,987	7,709	8,576
Length of wire (miles)—					
Telegraph purposes only	63,295	62,781	62,619	63,528	66,702
Telegraph and telephone purposes ..	82,234	84,855	91,461	105,351	126,086
Length of line (miles)—					
Conductors in Morse cable.. ..	2,133	2,139	2,139	2,201	2,399
Conductors in submarine cable ..	1,851	2,067	2,193	2,415	2,919
Pole routes (miles)	60,580	62,489	66,648	71,828	80,399

(ii) *Particulars for each State.* The following table gives corresponding particulars for each State for the year 1924–25 :—

TELEGRAPHS.—STATES, SUMMARY, 30th JUNE, 1925.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of offices ..	2,792	2,219	1,347	736	934	548	8,576
Length of wire (miles)—							
Telegraph purposes only	23,120	6,811	14,087	12,430	9,904	350	66,702
Telegraph and telephone purposes	39,340	24,319	32,859	9,412	14,228	5,928	126,086
Length of line (miles)—							
Conductors in Morse cable	913	1,101	350	..	21	14	2,399
Conductors in submarine cable (statute miles) ..	2,080	443	57	71	5	263	2,919
Pole routes (miles) ..	29,599	14,226	12,572	9,218	11,031	3,753	80,399

A total length of 192,788 miles of wire is available for telegraph purposes, of which 126,086 miles are also used for telephone purposes, and the figures show increases of 23,909 (14 per cent.) and of 20,735 miles (19 per cent.) respectively over the corresponding mileages for the previous year.

3. Number of Telegrams Dispatched.—(i) *Total for Australia.* The number of telegrams dispatched to destinations within Australia in each of the last five years is given hereunder :—

TELEGRAMS DISPATCHED.—AUSTRALIA, 1921 TO 1925.

Telegrams.	Year ended 30th June—				
	1921.	1922.	1923.	1924.	1925.
Number(*a*) ..	16,723,111	15,796,022	15,828,629	16,699,199	17,132,145

(*a*) Including interstate cablegrams.

(ii) *Totals for each State.* The appended table shows the number of telegrams dispatched in each State in 1924–25 for delivery in that State, the number dispatched in each State for delivery in other States, and the total number of telegrams—exclusive of cablegrams for places outside Australia—dispatched in each State :—

TELEGRAMS DISPATCHED.—STATES, 1924-25.

State, etc. ..	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Inland	4,484,933	2,910,978	2,232,144	1,096,754	1,466,687	305,843	12,497,339
Interstate(*a*) ..	1,411,414	1,336,764	721,915	535,341	391,339	238,033	4,634,806
Total ..	5,896,347	4,247,742	2,954,059	1,632,095	1,858,026	543,876	17,132,145

(*a*) Including interstate cablegrams.

The figures in the foregoing table show an increase in the total volume of telegraph business of 432,946 messages as compared with the previous year.

4. Letter-telegrams.—Letter-telegrams are accepted at any hour at telegraph offices which are open for business after 7 p.m., subject to the condition that delivery is effected by posting at the letter-telegram office of destination.

5. Wireless Telegraphy and Telephony.—(i) *General.* A statement in regard to the initial steps taken towards the establishment of wireless telegraphy in Australia was given in Official Year Book No. 18, p. 243, but consideration of space precludes its repetition in the present issue.

With the exception of the war period, licences for experimental and amateur stations have been issued since 1911, with restrictions on the use of transmitting equipment. At the end of April, 1926, there were 793 such experimental stations, including 341 transmitting stations.

The regulations were amended in 1920 with a view to encouraging the erection of "land" stations by pastoralists and others in remote districts, but very few satisfactory applications were received. The Department, however, at the end of 1925 opened stations at Wave Hill and at Camooweal to collect and distribute messages from private stations that might subsequently be erected in the Northern Territory.

Regulations under the Navigation Act require that all ships registered in Australia of 1,600 tons or more registered tonnage, or carrying more than 12 passengers, shall be fitted with an efficient wireless telegraphy installation. At the end of April, 1926, there were 121 vessels so equipped.

Two Class "A" broadcasting stations are in operation in New South Wales and in Victoria. Class "B" stations as follows are in operation, viz.:—New South Wales, 7; Victoria, Queensland, South Australia, and Tasmania, 1 each.

The revised regulations issued in 1924 and amended in 1925 prescribe the licence fees to be paid by owners of receiving sets, and by radio dealers and experimenters. Each State was divided into three zones, and the annual fees and the distances from the capital city of the respective zones were fixed as follows:—

Class of Licence.	Zone 1. Up to 250 Miles.	Zone 2. 250 to 400 Miles.	Zone 3. Beyond 400 Miles.
	£ s. d.	£ s. d.	£ s. d.
Broadcast listeners' licences	1 7 6	1 2 6	0 17 6
,, ,, ,, (Temporary (*a*))..	1 0 0	0 17 6	0 15 0
Experimental licences			
Dealers' listening licences	5 0 0	3 0 0	2 0 0

(*a*) Per week. Others for one year.

The Postmaster-General may reduce the fees at the end of the first year; and in the second year, which commences on the 1st July, 1926, the whole scheme may be reviewed.

Of the revenue obtained from the licence fees the Postal Department retains 5s. for each special broadcast listener's licence; 2s. 6d. for each ordinary broadcast listener's licence; 25 per cent. for a temporary broadcast listener's licence; 25 per cent. for a dealer's listening licence; and 10s. for an experimental licence; the remainder of the revenue being available for distribution to the broadcasting company or companies in the State in which the revenue is collected. The companies must supply a satisfactory programme, use the authorized power, and provide effective transmission.

Two classes of broadcasting stations may operate, viz.:—Class "A"—in respect of which the receiving licence fees are payable, and Class "B"—in respect of which no receiving licence revenue is payable. In New South Wales and Victoria two Class "A" stations only may be licensed. The licensees of these stations receive respectively 70 per cent. and 30 per cent. of the licence fees available for distribution. In the other States one Class "A" station only may be licensed, and the whole of the "available revenue" for the particular State will be payable in respect of the station. The fees payable to the Department for Class "A" licences are £15, and for Class "B" £5, the licence being valid for a period of 5 years.

The number of receiving licences in operation in Australia up to the end of April, 1926, is as follows:—Broadcast listeners' licences, 106,779; Dealers' listening licences, 1,928; Experimental licences—Transmitting and receiving, 341; Receiving only, 452.

(ii) *Radio Stations* (*Pacific Ocean*). Radio-telegraphic stations have been erected at Suva, Ocean Island, Tulagi, and Vila under the control of the High Commissioner of the Pacific, while the New Zealand Government has erected high-power stations at Awanui (Auckland), Awarua (Bluff), and Apia (Samoa), and low-power stations at Auckland, Chatham Islands, Raratonga (Cook Islands), and Wellington.

(iii) *Licence Fees.* In addition to the licences referred to in sub-section (i) *ante*, the regulations provide for the issue of the following licences, for which the respective fees per annum, payable in advance, are as shown, viz. :—(*a*) Coast Station, £1 ; (*b*) Ship Station, £1 ; (*c*) Land Station, £1 ; (*d*) Portable Station, £1 ; and (*e*) Aircraft Station, £1.

(iv) *Licences Issued.* The following tables show the number of each class of licence issued in each State, etc., during the years 1924–25 and 1925–26 :—

WIRELESS LICENCES, 1924-25.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.	Papua.	Grand Total.
Coast	1	1	5	1	5	3	1	17	2	19
Ship	33	58	10	16	3	1	..	121	..	121
Land	..	..	..	..	..	1	1	2	2	4
Broadcasting—										
"A"	2	2	1	1	1	..	..	7	..	7
"B"	5	3	4	1	..	..	..	15	..	15
Broadcast listeners—										
Ordinary ..	33,719	19,243	1,061	3,118	3,417	501	..	61,059	..	61,059
Special	11	24	5	5	8	1	..	54	..	54
Temporary ..	55	93	10	44	29	13	..	244	..	244
Experimental—										
Transmitting and receiving ..	78	58	25	24	14	12	..	211	2	213
Receiving only ..	236	156	40	32	29	11	..	504	1	505
Dealers' listening ..	813	807	136	152	94	42	2	2,044	..	2,044
Portable	..	..	..	..	..	..	..	..	..	..
Aircraft	..	..	..	..	..	..	..	..	..	..
Total Licences issued	34,953	20,445	1,297	3,394	3,600	585	4	64,278	7	64,285

The records show that 862 first-class and 7 second-class proficiency certificates were issued to successful candidates at examinations.

WIRELESS LICENCES, 1925-26.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.	Papua.	Grand Total.
Coast	1	1	5	1	5	3	1	17	2	19
Ship	32	59	7	17	3	..	..	118	..	118
Land	..	..	..	..	..	1	1	2	2	4
Broadcasting—										
"A"	2	2	1	1	1	1	..	8	..	8
"B"	7	1	1	1	..	1	..	11	..	11
Broadcast listeners—										
Ordinary ..	36,292	63,494	8,100	12,105	3,886	1,170	..	125,047	..	125,047
Special ..	9	49	8	174	1	1	..	242	..	242
Temporary ..	8	25	21	37	7	1	..	99	..	99
Experimental—										
Transmitting and receiving ..	124	114	37	31	26	23	..	355	2	357
Receiving only ..	185	133	40	32	24	10	..	424	6	430
Dealers' Listening ..	472	797	265	315	66	77	..	1,992	..	1,992
Portable	..	..	..	..	..	..	..	..	..	..
Aircraft	..	..	..	..	..	..	..	..	..	..
Total Licences issued	37,132	64,675	8,485	12,714	4,019	1,288	2	128,315	12	128,327

Licences previously issued by the Minister for the Navy under the Naval Defence Act 1910–1918, or by the Postmaster-General under the Act, and which were in force on 1st December, 1922, are not prejudiced by these Regulations.

Licences for the Territory of New Guinea are issued by the Administrator at Rabaul.

(v) *Radiotelegraphic Traffic.* (*a*) *Coast Stations.* The following statement shows the traffic handled by the several coast stations during the year 1924–25 :—

RADIO TRAFFIC.—COAST STATIONS, 1923-24 AND 1924-25.

State or Territory.	Particulars.						
	1924–25.					1923–24.	
	Total. Paying Words.	Messages.					
		Paying.	Service.	Weather.	Total.	Paying Words.	Total Messages.
	No.	No.	No.	No.	No.	No.	No.
New South Wales ..	319,971	21,348	573	5,183	27,104	289,608	23,515
Victoria	185,540	14,108	49	1,727	15,884	190,490	15,511
Queensland ..	842,963	47,408	3,764	5,692	56,864	833,546	57,558
South Australia ..	80,915	6,295	285	1,677	8,257	72,173	7,339
Western Australia ..	305,349	18,272	782	5,222	24,276	158,111	19,419
Tasmania	139,515	8,888	322	163	9,373	134,603	8,865
Northern Territory	9,312	647	2	1,123	1,772	6,320	1,375
Australia	1,883,565	116,966	5,777	20,787	143,530	1,684,851	133,582
Papua	297,754	16,019	232	1,135	17,386	329,704	16,905
Grand Total ..	2,181,319	132,985	6,009	21,922	160,916	2,014,555	150,487

(*b*) *Island Stations.* Particulars of the island radio traffic dealt with during the year 1924–25 are given hereunder :—

RADIO TRAFFIC.—ISLAND STATIONS, 1924-25.

Particulars.	To Australia.	From Australia.	Inter-Island.	Ship.	Service.	Total.
Messages	9,565	7,096	6,808	2,110	5,279	30,858
Words	178,933	175,970	204,811	34,040	63,078	656,832

(vi) *Proficiency Certificates.* Proficiency certificates for commercial wireless operators are issued by the Minister to individuals who pass the specified tests. Amateur operators' certificates and watchers' certificates are, in addition, issued to successful candidates at the prescribed examinations.

Every ship-station and coast-station, in respect of which a licence is issued, must be operated by a person holding a certificate of proficiency.

At 30th June, 1925, 882 first-class and 45 second-class proficiency certificates in addition to 33 watchers' certificates had been issued.

6. **Revenue and Expenditure.**—Particulars as to the revenue from the telegraph systems for the years 1920–21 to 1924–25 were given in earlier pages.

§ 3. Submarine Cables.

1. **First Cable Communication with the Old World.**—In earlier issues of the Year Book will be found a detailed account of the connexion of Australia with the old world by means of submarine cables. (See No. 6, p. 770.)

2. **The Tasmania-Victoria Cables.**—These cables were opened to the public on the 1st May, 1909. Their aggregate length is approximately 350 nautical miles of main cable, and 20 nautical miles each of intermediate and shore-end cable, making a total of 390 nautical miles.

3. The Eastern Extension Company's Cables.—In addition to the first Tasmania-Victoria cable and the original cable from Darwin (see Year Book No. 6, p. 770), the Eastern Extension Company has constructed several other cables connecting with various places in Australia, viz., Darwin to Banjoewangie (two lines); Fremantle to Durban; Fremantle to Adelaide; Java to Cocos Island, which provides another route between Australia and South Africa; and a cable partly owned by this Company connecting the Darwin-Singapore cable with London via Hong Kong, Shanghai, Possiet Bay (Pacific Russia), Libau (Latvia), and Newbiggin (London).

4. The Pacific Cable.—(i) *Cable Lines.* The Pacific Cable lines are controlled by the Pacific Cable Board, consisting of three representatives of the Imperial Government, two each from Canada and Australia, and one from New Zealand. The main cable route known as the "All Red" runs from Southport in Queensland to Bamfield in British Columbia, thence overland to Montreal. From this point messages are transmitted across the Atlantic over the cables of the Anglo-American and Commerical Companies, or, if so desired, the Marconi Wireless System between Canada and the United Kingdom may be availed of for either homeward or outward messages. Cable stations are established at Norfolk Island, Fiji, and Fanning Island. A branch cable approximately 600 miles long runs from Norfolk Island to Doubtless Bay, North Island of New Zealand.

The assent of each of the Governments interested was obtained for the duplication of the system south of Fiji, and a contract for the submarine cables was placed with the Telegraph Construction and Maintenance Company of Greenwich, and the laying of the Sydney–Southport cable was completed on 11th July, 1923, and the Auckland–Suva cable on 12th August, 1923, the total cost of this work being £337,941. Tenders have been let for duplication of the cable between Fiji and Vancouver Island, the contractors for each section, i.e., Vancouver Island–Fanning Island and Fanning Island–Fiji, undertaking to complete the work by 30th September, 1926.

During the year 1924–25 two short interruptions occurred which, however, owing to the Board's facilities for diverting traffic, did not cause any dislocation in the service.

(ii) *Financial Summary.* The receipts for the year 1924–25 exceeded the ordinary expenses by £254,589. After payment of the annuity of £77,545 in respect of interest and repayment of the capital of £2,000,000, and of the annuity of £9,150 to the renewal fund for interest and sinking fund on £177,254 borrowed from the fund for the purposes of the Auckland–Sydney cable, there remained a surplus of £167,894, which, in view of the question of the duplication of the northern cables, was employed to strengthen the reserve and renewal fund. The following table gives the revenue, expenditure, total profit, and the proportion thereof payable to Australia for the years ended 31st March, 1921 to 1925:—

PACIFIC CABLE—FINANCIAL SUMMARY, 1921 TO 1925.

Year ended 31st March—	Revenue.	Expenditure (including Annuities and Renewal Fund).	Profit.	Australian Proportion of Profit.
	£	£	£	£
1921 ..	633,343	629,866	3,477	1,159
1922 ..	528,428	507,666	20,762	6,921
1923 ..	529,228	529,228	..	..
1924 ..	551,789	551,789	..	..
1925 ..	549,917	549,917	..	..

5. **New Zealand Cables.**—A submarine cable, 1,191 miles in length, from New Zealand to Australia, was laid in 1876. The Australian shore-end of the cable is at Botany Bay, while the New Zealand terminus is at Wakapuaka near Nelson in the Middle Island, from which place another cable, 109 miles in length, is laid to Wanganui in the North Island. A second cable between New Zealand and Australia (Auckland to Sydney) was opened for traffic on the 31st December, 1912.

6. **The New Caledonia Cable.**—This cable was opened for use in October, 1893, the Australian shore-end being at Burnett Heads, near Bundaberg. The guarantees of the Governments of New South Wales and Queensland have since been transferred to the Commonwealth Government.

7. **Lengths of Cable Routes.**—Particulars regarding the lengths of the various routes were given in preceding issues of the Official Year Book (see No. 17, p. 358), but limitations of space preclude their repetition in the present volume.

8. **Cable Business.**—(i) *Australia.* The subjoined table shows the number of cablegrams received and dispatched in Australia from 1922–23 to 1924–25 :—

CABLEGRAMS.—AUSTRALIA, 1922-23 TO 1924-25.

Cablegrams.	Cablegrams Received.			Cablegrams Dispatched.			Total Cablegrams Received and Dispatched.		
	1922–23.	1923–24.	1924–25.	1922–23.	1923–24.	1924–25.	1922–23.	1923–24.	1924–25.
Number ..	533,977	565,981	617,394	539,926	567,571	641,408	1,073,903	1,133,552	1,258,802

(ii) *States.* The number of cablegrams received and dispatched in each State during the year 1924–25 is given hereunder :—

CABLEGRAMS.—STATES, 1924-25.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.(*a*)	Australia.
Number received ..	310,543	216,734	25,411	31,272	25,577	7,857	617,394
Number dispatched	320,600	214,048	30,092	35,965	31,385	9,318	641,408
Total ..	631,143	430,782	55,503	67,237	56,962	17,175	1,258,802

(*a*) Exclusive of interstate cablegrams, which are included with interstate telegrams.

9. **Cable Rates.**—The rates for ordinary business between Great Britain and Australia were reduced from 3s. to 2s. 6d. per word as from 1st December, 1924, and from 7th July, 1925, the press rate was reduced from 7½d. to 6d. per word.

10. **Night Letter Service.**—A night letter service for traffic between Australia and New Zealand was introduced on 1st May, 1924. The rate is fixed at 3s. per message of 20 words, and 2d. per word in excess of 20. On 1st December, 1924, the service was extended to take in traffic to and from Fiji at the rate of 5s. 10d. per message of 20 words, and excess words at the rate of 3½d. per word. Night letter telegrams are accepted at any time and are delivered by first post on the morning following receipt.

11. **Cable Subsidies Paid.**—The following table shows the amount of subsidy paid in each of the years 1921 to 1925 :—

CABLE SUBSIDIES, 1921 TO 1925.

Subsidies.	Year ended 30th June—				
	1921.	1922.	1923.	1924.	1925.
Amount .. £	3,749	3,840	3,985	2,136	..

As the agreement in connexion with the Tasmanian cable expired in 1909, and as new cables were laid by the Commonwealth Government, the guarantees were, in the course of the year 1910, reduced to those in connexion with the New Caledonia and Pacific cables. From 1915–16 onwards the only cable subsidy paid by Australia was in respect of the New Caledonian cable guarantee.

§ 4. Telephones.

1. **Telephone Services.**—(i) *Mileage, etc., Australia.* The following table shows the mileage of lines, etc., for telephone purposes, giving trunk lines separately, on 30th June, 1923 to 1925 :—

TELEPHONE LINES—AUSTRALIA, 30th JUNE, 1923 TO 1925.

Particulars.		1923.	1924.	1925.
Ordinary Lines—				
Conduits	duct miles	3,146	3,447	3,748
,, ...	route miles	1,530	1,804	2,039
Conductors in aerial cables	loop mileage	34,986	32,289	29,604
Conductors in underground cables	,,	312,224	362,037	434,091
Conductors in cables for junction circuits	,,	49,493	54,165	62,021
Open conductors	single wire mileage	221,832	250,898	312,454
Trunk Lines—				
Telephone trunk lines only	miles	40,851	55,516	85,201
Telegraph and telephone purposes ..	,,	91,461	105,351	126,086

(ii) *Comparison with Other Countries.* Australia at present stands seventh in the list of countries having the greatest development of telephone facilities. This position may be considered satisfactory in view of the area and distribution of population, and the average length of wire required to provide a subscriber's service. The average length of wire per instrument in Australia is 3.60 miles, as compared with 2.69 miles in the United States of America and in New Zealand, and 2.55 miles in Canada.

(iii) *Recent Improvements.* (*a*) *The "Carrier-wave" System.* This system of operating in connexion with long-distance telephony, which was introduced on the 10th September, 1925, represents one of the most remarkable of recent advances in electrical communication. Its application to the Melbourne–Sydney service has resulted not only in the facilitation and expansion of business, but in a great saving of expense.

The " Carrier-wave " system permits of four separate conversations on a single pair of wires, and at the same time accommodates two telegraph duplex circuits on which four telegrams may be transmitted simultaneously. The necessity for expensive duplications of lines, which was becoming an urgent necessity, is thereby obviated. A similar service outside Australia is in operation only in the United States of America.

(*b*) *Automatic Exchanges.* At 30th June, 1925, there were 22 automatic or semi-automatic exchanges in operation providing facilities for 59,014 subscribers, 57,237 of whom were in the metropolitan areas. On the same date 20 automatic exchanges, with a total capacity of over 60,000 subscribers, were in course of construction.

(iv) *Summary for States.* Particulars relating to the telephone service in each State for the years ended 30th June, 1923 to 1925, will be found in the following table :—

TELEPHONE SERVICES.—SUMMARY, 1923 TO 1925.

Particulars.	Year (30th June.)	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
No. of Exchanges ..	1923	1,026	708	448	241	169	233	2,825
	1924	1,085	1,062	499	296	216	270	3,428
	1925	1,201	1,264	618	373	315	307	4,078
No. of Telephone Offices (Including Exchanges)	1923	2,274	1,739	902	572	461	454	6,402
	1924	2,456	1,955	1,093	621	739	503	7,367
	1925	2,623	2,139	1,314	681	854	511	8,122
No. of lines connected ..	1923	87,352	61,201	27,612	19,306	11,590	6,917	213,978
	1924	97,310	71,352	30,619	23,155	12,929	7,809	243,174
	1925	107,497	83,640	34,560	28,968	14,405	8,784	277,854
No. of instruments connected	1923	113,645	84,452	34,634	25,663	14,793	8,516	281·703
	1924	125,995	97,528	38,318	30,332	16,410	9,696	318,279
	1925	139,557	114,169	43,073	37,057	18,340	10,753	362,949
(*a*) No. of subscribers' instruments	1923	110,200	82,508	33,241	24,832	14,144	8,024	272,949
	1924	122,216	95,418	36,815	29,459	15,661	9,175	308,744
	1925	135,527	111,786	41,371	36,118	17,699	10,124	352,625
(*b*) No. of public telephones	1923	1,815	1,480	942	567	407	373	5,584
	1924	1,945	1,640	1,035	588	475	399	6,082
	1925	2,165	1,900	1,212	629	586	493	6,985
(*c*) No. of other local instruments	1923	1,630	464	451	264	242	119	3,170
	1924	1,834	470	468	285	274	122	3,453
	1925	1,865	483	490	310	55	136	3,339
Instruments per 100 of population	1923	5.19	5.28	4.35	5.00	4.25	3.98	4.97
	1924	5.66	5.95	4.63	5.70	4.55	4.55	5.48
	1925	6.13	6.83	5.04	6.77	4.82	5.07	6.12
		£	£	£	£	£	£	£
Earnings	1923	1,184,035	850,182	411.523	304,061	166,338	87,268	3,003,407
	1924	1,290,972	945,409	454,750	343,846	182,153	95,485	3,312,615
	1925	1,411,341	1,055,390	494,103	396,975	202,066	101,235	3,661,110
Working expenses ..	1923	959,836	574,487	326,389	197,520	141,958	83,352	2,283,542
	1924	1,089,221	676,069	363,144	245,239	153,370	96,796	2,623,839
	1925	1,216,284	856,164	443,820	322,263	168,945	121,437	3,128,913
		%	%	%	%	%	%	%
Percentage of working expenses on earnings	1923	81.06	67.57	79.31	64.96	85.34	95.51	76.03
	1924	84.37	71.51	79.85	71.32	84.20	101.37	79.21
	1925	86.18	81.12	89.82	81.18	83.61	119.96	85.46

The number of instruments per 100 of population has increased from 4.97 in 1922–23 to 6.12 in 1924–25. The actual number of instruments has increased from 281,703 to 362,949—an increase of almost 29 per cent.

(v) *Subscribers' Lines and Calling Rates.* The next table gives the number of subscribers' lines and the daily calling rate at central, suburban, and country telephone exchanges in the several States for the year 1924–25 :—

TELEPHONES.—SUBSCRIBERS' LINES AND DAILY CALLING RATE, 1924-25.

State.	Central Exchanges.		Suburban Exchanges.		Country Exchanges.		Total.	
	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.
New South Wales	12,484	9.97	47,708	3.78	41,009	1.54	101,201	3.64
Victoria ..	12,266	8.72	36,150	3.63	29,126	1.44	77,542	3.61
Queensland ..	8,202	7.13	5,110	3.31	20,837	2.44	34,149	3.70
South Australia	8,340	7.00	8,154	3.40	9,982	1.10	26,476	3.67
Western Australia	5,016	6.39	2,834	4.39	6,007	1.66	13,857	3.93
Tasmania ..	2,404	4.39	760	2.32	5,168	1.64	8,332	2.53
Australia ..	48,712	8.02	100,716	3.68	112,129	1.65	261,557	3.62

A comparison of the daily calling rates for each class of exchange shows that New South Wales registered the greatest number per line at central exchanges, Western Australia at suburban exchanges, and Queensland at country exchanges. For Australia as a whole, the average number of calls per line at central exchanges was more than double the number registered at suburban exchanges, while the average for suburban exchanges was slightly more than double the number shown for country exchanges.

(vi) *Trunk Line Calls and Revenue.* In the following table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each of the States for the years 1922–23 to 1924–25 :—

TELEPHONES—TRUNK LINE CALLS AND REVENUE FOR THE YEARS 1922-23 TO 1924-25.

Particulars.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
Total Calls for Year—	No.	No.	No.	No.	No.	No.	No.
1922–23 ..	5,985,820	4,168,469	2,616,344	1,587,593	707,159	849,197	15,914,582
1923–24 ..	6,748,101	4,709,531	2,938,267	1,886,706	855,106	977,689	18,115,400
1924–25 ..	7,843,286	5,639,117	3,545,610	2,448,991	1,103,644	1,094,802	21,675,450
Total Revenue for Year—	£	£	£	£	£	£	£
1922–23 ..	221,919	157,062	128,364	73,292	33,365	28,368	642,370
1923–24 ..	243,529	170,959	144,890	84,025	38,803	31,013	713,219
1924–25 ..	261,940	184,809	153,354	97,359	48,887	30,691	777,040
Average Revenue per Call—	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.
1922–23 ..	8.89	9.04	11.77	11.08	11.32	8.02	9.68
1923–24 ..	8.66	8.71	11.83	10.57	10.88	7.61	9.44
1924–25 ..	8.01	7.86	10.38	9.54	10.63	6.73	8.60

While the number of trunk line calls recorded during 1924–25 has increased by more than 3½ millions over the figures for the previous year, the average revenue per call has decreased by 0.84d. per call, due to the fact that the radial charge basis (introduced on 1st April, 1924) was operative for the whole of 1924–25 as compared with only three months of the year 1923–24.

The rapid growth in connexion with subscribers' services is, however, bringing about increased trunk line traffic, and extensive works are in progress to meet the growing demand and to improve the trunk line system generally.

2. **Revenue from Telephones.**—Particulars regarding the revenue from telephone services are included in the tables at the end of § 1.

CHAPTER VIII.

FINANCE.

A. COMMONWEALTH FINANCE.

§ 1. General.

1. **Financial Provisions of the Constitution.**—The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Chapter IV., "Finance and Trade," being sections 81 to 105 of the Constitution Act. Two other sections which have a most important bearing on questions of Commonwealth finance are sections 69 and 51.

Section 69 provides for the transfer to the Commonwealth from the States of certain specified departments, while section 51, in outlining the powers of the Federal Parliament, implies the transfer or creation of various other departments. Section 87 deals with the financial relations between the Commonwealth and the States. These matters have been treated in some detail in previous issues of the Official Year Book up to and including No. 12, and further reference to them will not be made here.

The Commonwealth Treasury issues annually a document entitled "The Treasurer's Statement of Receipts and Expenditure during the year ended 30th June," with which is incorporated the report of the Commonwealth Auditor-General for the year. This series of annual statements is the principal authority for the majority of the tables given herein.

2. **Accounts of Commonwealth Government.**—The Commonwealth Government, like the States Governments, bases its accounts mainly upon three funds, the Consolidated Revenue Fund, the Trust Fund, and the Loan Fund. The last mentioned fund came into existence in the financial year 1911–12, but on the outbreak of war it became so important that it is now treated in two parts—a General Loan Fund mainly for purposes of Public Works, and a War Loan Fund for purely military purposes. The accounts of these funds are now so interwoven that a complete view of Commonwealth Finance can hardly be obtained by separate analysis of each. Two tables are therefore appended, showing receipts and disbursements from all sources for the last five years. The different funds will then be treated in detail in the subsequent paragraphs.

COMMONWEALTH RECEIPTS, 1920–21 TO 1924–25.

Heading.	1920–21.	1921–22.	1923–23.	1923–24.	1924–25.
	£	£	£	£	£
Consolidated Revenue ..	65,517,608	64,897,046	64,720,635	66,017,203	68,854,809
Trust Funds in aid of Revenue ..	5,724,806	6,618,327	6,408,424	7,428,574	2,591,153
Total	71,242,414	71,515,373	71,129,059	73,445,777	71,445,962
General Loan Fund	4,101,726	12,253,610	10,362,083	34,086,149	16,528,286
Unexpended Balance from previous years	..	..	822,079	1,557,078	1.501,913
Total	4,101,726	12,253,610	11,184,162	35,643,227	18,030,199
War Loan Fund	33,064,475	14,452,902	36,784	13,662,824	37.418
Unexpended Balance from previous years	..	6,205,030	8,889,183	4.296,988	985,899
Total	33,064,475	20,657,932	8,925,967	17,959,812	1,023,317
Grand Total	108,408,615	104,426,915	91,239,188	127,048,816	90,499,478

COMMONWEALTH EXPENDITURE, 1920–21 TO 1924–25.

Heading.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Expenditure from Consolidated Revenue	52,059,118	51,453,087	50,106,510	48,676,907	58,209,988
Balance paid into Trust Funds ..	6,618,327	6,408,424	7,428,574	600,003	3,109,530
Expenditure from Trust Funds ..	5,724,806	6,618,327	6,408,424	7,428,574	2,591,153
Subsidy to States	6,840,163	7,035,535	7,185,551	7,324,538	7,535,291
Surplus allocated to specific purposes	..	..	..	4,500,000	..
Redemptions from Revenue ..	..	..	..	4,915,755	..
Total	71,242,414	71,515,373	71,129,059	73,445,777	71,445,962
General Loan Fund Expenditure	4,101,726	11,431,531	9,627,084	34,141,314	14,618,587
Unexpended Balance of General Loan Expenditure	..	822,079	1,557,078	1,501,913	3,411,612
Total	4,101,726	12,253,610	11,184,162	35,643,227	18,030,199
War Expenditure from War Loan Fund	26,859,445	11,768,749	4,628,979	16,973,913	1,023,317
Unexpended Balance from War Loan Fund	6,205,030	8,889,183	4,296,988	985,899	..
Total	33,064,475	20,657,932	8,925,967	17,959,812	1,023,317
Grand Total	108,408,615	104,426,915	91,239,188	127,048,816	90,499,478

§ 2. Consolidated Revenue Fund.

Division I.—Nature of Fund.

The provisions made for the formation of a Commonwealth Consolidated Revenue Fund, and the means to be adopted for operating on that fund, are contained in sections 81, 82, and 83 of the Constitution. In section 81 it is provided that "All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution." A strictly literal interpretation of this section would appear to require all loan and trust moneys received by the Commonwealth Executive to be paid to Consolidated Revenue. It is, however, held by Quick and Garran, in their "Annotated Constitution," that the "generic word *moneys* must be controlled by the preceding specific word *revenues*, and limited to moneys in the nature of revenue." This is the view of the matter which has been adopted by the Commonwealth Treasury in the preparation of its accounts. At present, certain moneys received by the Commonwealth, which are not of the nature of revenue, are paid to Trust Account, and other moneys are paid to Loan Account. As regards expenditure from the Consolidated Revenue Fund, section 82 provides that the costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund should form the first charge thereon, while section 83 stipulates that "no money shall be drawn from the Treasury of the Commonwealth except under appropriations made by law." Such appropriations are either special, and as such are provided for by means of a permanent Act, or annual, and provided for in an annual Appropriation Act.

Division II.—Revenue.

1. **Total.**—The consolidated revenue of the Commonwealth, which in 1901–2, the first complete financial year under the new régime, amounted to £11,296,985, had, in 1924–25, reached a total of £68,854,809, an increase in the period of £57,557,824.

The total amount of revenue collected by the Commonwealth Government during each of the last five years is shown in the following table :—

COMMONWEALTH CONSOLIDATED REVENUE, 1920–21 TO 1924–25.

Revenue.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Total ..	65.517.608	64,897,046	64,720,635	66,017,203	68,845,809

The increase in recent years is due to the expansion in taxation, which is considered in detail in a later sub-section.

2. **Revenue per Head.**—The next table shows the amount of revenue from various sources per head of population for the last five years :—

COMMONWEALTH CONSOLIDATED REVENUE PER HEAD, 1920–21 TO 1924–25.

Source of Revenue.	1920–21.			1921–22.			1922–23.			1923–24.			1924–25.		
	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*
Taxation	9	13	9	9	0	4	8	17	1	8	16	11	8	19	11
Public Works and Services	1	13	4	1	14	8	1	14	9	1	13	11	1	15	2
Other Receipts	0	15	1	1	0	7	0	17	11	0	18	10	0	19	5
Total	12	2	2	11	15	7	11	9	9	11	9	8	11	14	6

3. **Sources of Revenue.**—(i) *General.* The following table furnishes details of the revenue from each source during the years 1920–21 to 1924–25 :—

COMMONWEALTH CONSOLIDATED REVENUE—SOURCES, 1920–21 TO 1924–25.

Source.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Taxation—	£	£	£	£	£
Customs	21,731,210	17,328.310	22,597,306	25,177,882	26,405,161
Excise	10,078,696	10,302,049	10,274,823	10,572,902	10,787,620
Land Tax	2,155,699	2,284,040	2,018,876	2,030,127	2,519,711
Estate Duty	1,179,513	991.378	1,172.935	1,320,911	1,381,051
Income Tax	14,351,408	16,790,682	12,904,518	11,057,555	11,136,344
Entertainments Tax	649,828	675,675	629,802	622,460	680,586
War Time Profits Tax	2,083,139	1,306,708	286,757	70,646	*Dr.* 74,783
War Postage	197.928	..	..	..	..
Total	52,427,421	49,678,842	49,885,017	50,852,483	52,835,690
Public Works and Services—					
Postal	8,388.569	9,320,654	9,792,273	9,757,021	10,044,486
Railways	235,387	217,301	230,136	232,406	287,037
Commonwealth Steamers	137,959	..	..	..	..
Detained Enemy Vessels	131,763	..	..	..	..
Other	141,418	4,094	14,340	..	..
Total	9,035,096	9,542,049	10,036,749	9,989,427	10,331,523
Other Revenue—					
Interest, Discount, etc.	1,996,012	2,361,137	2,574,962	2,386,136	3,358,239
Coinage	106,373	178,439	137,696	151,682	107,275
Defence	185,649	150,297	223,402	315,708	139,078
Quarantine	42,972	42.639	41,388	38,445	36,599
Territories (*a*)	79,575	77.844	28,189	30.658	38,720
Patents, etc.	40,639	41,393	40,491	37,770	39.026
Lighthouses	180,105	171,967	173,363	179,733	205,170
Pension Contributions	54,632	57,489	58,205	56,638	51,868
Defence Trust Account	116,329	203,085	102,419	40,565	7,413
Unexpended Balances of London Orders	696,095	..	..	..	..
Net Profit on Australian Note Issue	394,016	1,261,482	1,072,893	1,264,583	1,277,975
Miscellaneous	162,694	1,130,383	345,861	673,375	426,233
Total	4,055,091	5,676,155	4,798,869	5,175,293	5,687,596
Grand Total	65,517,608	64,897,046	64,720,635	66,017,203	68,854,809

(*a*) Exclusive of Railways and other items which appear elsewhere under their appropriate headings.

The revenue from taxation reached its highest point in 1924–25 with upwards of £52,800,000. This represents an increase of almost £2,000,000 over that of 1923–24 and £400,000 over the previous record collection in 1920–21. The increase was principally due to Customs receipts. With the exception of the year 1923–24, when there was a slight decrease, the postal receipts have shown a consistent upward tendency. During the last four financial years the operations of the shipping line have resulted in a deficit. The large amount for 1921–22, under the head of "Miscellaneous," includes £835,000, payment on account of the Army of Occupation.

(ii) *Taxation.*—(*a*) *Customs Revenue.* Particulars for the five years 1920–21 to 1924–25 are furnished in the following table :—

COMMONWEALTH CUSTOMS REVENUE, 1920–21 TO 1924–25.

Classes.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Stimulants	1,773,103	1,981,882	2,294.264	2,604,200	2,740,191
Narcotics	1,533,860	1,619,916	1,699,023	1,746,785	1,889,604
Sugar	3,193	9,991	10,723	12,995	10,414
Agricultural products	819,842	951,816	1,156,209	1,296,361	1,118,219
Apparel and textiles..	6,195,545	4,514,541	5.825,461	5,174,929	5,524,439
Metals and machinery	4,728,937	3,324,601	3,732.677	4.323,070	4,433,374
Oils, paints, etc. ..	542,619	409,768	563,257	696,235	792,994
Earthenware, etc. ..	643,731	503,941	557,017	631,056	654,120
Drugs and Chemicals	420,327	395,777	536,975	444,587	465,174
Wood, wicker and cane	540,638	552,842	1,054,543	1,209,814	1,152,269
Jewellery, etc. ..	704,749	525,207	723,180	773,206	875.365
Leather, etc. ..	690,455	482,389	1,131,572	1,561,086	1,576,032
Paper and stationery	1,091,173	633,261	746,906	723,267	724,370
Vehicles	1,033,006	718,080	1,553,355	2,673,447	3,038,209
Musical Instruments ..	239,822	170,859	248,467	460,445	504,419
Miscellaneous articles	718,752	480,461	706,572	796,069	845,993
Other receipts ..	51,458	52,978	57,105	50,330	59,975
Total Customs ..	21,731,210	17,328,310	22,597,306	25,177,882	26,405,161

The receipts in 1920–21 were abnormally high owing to the fulfilment of large numbers of contracts from abroad before the anticipated time. The large increase in 1922–23 and 1923–24 over previous years may be ascribed to the increase in imports due to a considerable extent to heavy borrowings abroad by the Commonwealth and State Governments, while the rise in 1924-25 is due to increased trade resulting from the prosperity of the season, and was to some extent influenced by heavier imports of stimulants and narcotics owing to anticipation of a higher tariff thereon.

(*b*) *Excise Revenue.* Particulars concerning the amount of Excise collected under each head during each of the years ending 30th June, 1921, to 1925, are given hereunder :—

COMMONWEALTH EXCISE REVENUE, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Beer	5,439,339	5,473,220	5,498,800	5,501,648	5,642,646
Spirits	1,558,766	1,510,432	1,617,975	1,757,414	1,766,526
Tobacco	3,055,308	3,288,852	3,124,926	3,284,594	3,349,095
Licences	12,569	12,716	12,780	12,428	11,985
Starch	12,714	16,829	20,342	16,818	17,368
Total Excise ..	10,078,696	10,302,049	10.274,823	10,572,902	10,787,620

(*c*) *Land Tax.* Details in regard to rates of tax, etc., will be found in Official Year Book No. 14 at the end of Section XX.

A table is appended showing the actual amounts received by the Treasury for five years. The yield of the tax has been fairly constant, the decrease of £265,164 in 1922–23 being caused mainly by the abolition during the year of the additional 20 per cent. tax which was imposed under Act No. 30 of 1918, while the increase of nearly £500,000 in 1924–25 was brought about by the collection of arrears and of taxes due on Crown leaseholds.

COMMONWEALTH LAND TAX COLLECTIONS, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
New South Wales ..	933,649	1,015,851	900,330	854,589	1,172,317
Victoria..	865,001	910,764	748,016	818,328	944,997
Queensland	85,978	95,763	70,398	91,106	114,874
South Australia	166,260	174,983	181,893	162,593	182,191
Western Australia ..	63,349	45,820	80,952	64,345	62,503
Tasmania	41,462	40,859	37,287	39,166	42,829
Total	2,155,699	2,284,040	2,018,876	2,030,127	2,519,711

(*d*) *Estate Duty.* Collections from this source for the five years 1921 to 1925, are given hereunder :—

COMMONWEALTH ESTATE DUTY COLLECTIONS, 1920–21 TO 1924–25.

Year.	N.S.W.	Vic. (*b*)	Q'land.	S. Aust.(*a*)	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
1920–21 ..	385,070	432,281	98,054	171,450	76,516	16,142	1,179,513
1921–22 ..	363,731	372,126	97,785	82,698	39,865	35,173	991,378
1922–23 ..	483,616	397,489	100,158	132,833	41,455	17,384	1,172,935
1923–24 ..	477,974	555,324	87,278	147,035	27,322	25,978	1,320,911
1924–25 ..	604,358	496,723	87,820	116,950	58,380	16,820	1,381,051

(*a*) Including Northern Territory. (*b*) Including Central Office.

(*e*) *Income Tax.* The first Commonwealth Income Tax was levied during the financial year 1915–16. The legislation on the subject comprises the Income Tax Assessment Act No. 34 of 1915, and subsequent amending Acts. Full details as to the original Acts are to be found in Commonwealth Official Year Book No. 9. The result of the last five years' collections was as follows :—

COMMONWEALTH INCOME TAX COLLECTIONS, 1920–21 TO 1924–25.

State in which Collected.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
New South Wales ..	4,920,154	5,273,221	4,274,432	3,629,203	3,579,546
Victoria (*a*).. ..	5,867,958	7,312,618	5,525,429	4,873,611	5,159,331
Queensland.. ..	1,269,242	1,547,138	1,209,829	1,011,458	679,745
South Australia ..	1,382,029	1,494,210	1,072,821	713,042	1,110,015
Western Australia ..	557,277	692,339	524,781	552,779	327,607
Tasmania	350,382	463,421	292,641	274,510	277,226
Northern Territory ..	4,366	7,735	4,585	2,952	2,874
Total ..	14,351,408	16,790,682	12,904,518	11,057,555	11,136,344

(*a*) Including Central Office.

The rise in 1921–22 was due partly to increases in the rates of tax, and partly to the increase in money incomes associated with rising prices. The large decrease in 1922–23 is accounted for mainly by the raising of the exemption to £200, the introduction of the averaging system, the reduction of rates under Act No. 38 of 1922, and the decision to exempt bonus shares not paid out of current profits for all previous years. The falling-off in 1923–24 is due to concessions, including the increase in the deduction allowable for children, and the reduction in the Company rate from 2s. 5d. to 1s.

Agreements between the Commonwealth and all the States except Western Australia were made in 1923 with respect to the collection of Commonwealth Income Tax. These agreements came into operation in the cases of New South Wales, Victoria, and South Australia on 1st July, 1923, Tasmania on 10th October, and Queensland on 31st October, 1923. It is provided in each agreement that the Commonwealth Tax and the State Tax shall be collected by an officer acting for the Commonwealth and State, the Commonwealth appointing the State Commissioner as Deputy Commissioner for the State under the Income Tax Assessment Act of the Commonwealth. Provisions are included relating to the transfer of officers, the accounting of receipts, and the division of expenses. A joint form of Income Tax return is to be used in cases where the income is derived in one State only. The respective agreements are to remain in operation for a period of five years, and thereafter until the expiration of not less than six calendar months, upon notice in writing by either party to the agreement.

In Western Australia an arrangement was made previously by which the Commonwealth undertakes the collection of the State Income Tax.

(*f*) *Entertainments Tax.* The rate of Entertainments Tax, according to Amending Act No. 15 of 1922 which came into force on the 2nd October, 1922, is as follows :—For tickets of 1s., 1d. ; exceeding 1s., 1d. for the first shilling, and ½d. for every subsequent sixpence or part of sixpence. By an Amending Act (No. 23 of 1925) the rate is now twopence halfpenny for a payment of two shillings and sixpence, and one halfpenny for every subsequent sixpence or part thereof. The collections for the last five years are given hereunder.

The decreased returns for 1922–23 and 1923–24 as compared with 1921–22 result from the exclusion from taxation as from the 2nd October, 1922, of amounts for admission under one shilling.

COMMONWEALTH ENTERTAINMENTS TAX COLLECTIONS, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
New South Wales ..	272,373	276,786	256,755	248,615	274,791
Victoria..	203,781	222,210	208,240	212,011	223,555
Queensland	75,332	75,048	66,512	64,194	76,533
South Australia	42,210	45,925	45,015	46,114	52.588
Western Australia ..	39,716	38.420	37,605	35,358	37,797
Tasmania	16,266	17,193	15,589	16,066	15,214
Northern Territory ..	150	93	86	102	108
Total	649,828	675,675	629,802	622,460	680,586

(*g*) *War-Time Profits Tax.* This tax came into force on the 22nd September, 1917. It provides for a tax on the amount by which the profits made in the war-time financial year (1st July to 30th June following) exceeds the pre-war standard of profits, which may be either :—(*a*) the average profits of two of the three years before 4th August, 1917, or (*b*) 10 per cent. on the capital employed in the business. The tax in respect of profits derived in the financial year 1st July, 1915, to 30th June, 1916, was 50 per cent., and in all subsequent years 75 per cent. The collections for the last five years are given in the accompanying table. The original section 2 of the War Time Profits Tax Assessment Act stated that this Act would apply to the profits of any business arising up to 30th

June next after the Declaration of Peace in connexion with the late war. After the signing of the armistice, on 11th November, 1918, the section was amended to accord with that intention, and thus fixed the final application of the Act to profits arising during the year ended 30th June, 1919. The figures for subsequent years represent delayed collections under this Act. Amendments of earlier assessments entailed the payment of large refunds in 1924–25.

COMMONWEALTH WAR-TIME PROFITS TAX COLLECTIONS, 1920–21 TO 1924-25.

State in which Collected.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
New South Wales ..	784,339	376,480	43,524	8,412	*Dr.* 78,079
Victoria (*a*)	930,927	687,211	168,255	*Dr.* 19,595	5,428
Queensland	122,728	83,892	70,402	33,767	*Dr.* 6.683
South Australia ..	144,198	86.603	*b Dr.* 15,302	42,944	*Dr.* 386
Western Australia ..	85,255	44,351	15,377	3,777	316
Tasmania	15,692	28,172	4,501	1,341	4,621
Total	2,083,139	1,306,709	286,757	70,646	*Dr.* 74,783

(*a*) Including Central Office. (*b*) Including Northern Territory, £1,334.

(*h*) *War Postage.* This was a new source of revenue derived from an additional halfpenny rate imposed on postages from the 28th October, 1918. The amount credited to "War Postage" is the excess over the normal increase of revenue from postage. The amount collected for the balance of the financial year 1918–19 was £463,317, and in 1919–20 it was £745,962. In 1920–21 it fell to £197,928, as credits under this head of revenue ceased on 1st October, 1920.

(iii) *Public Works and Services.*—(*a*) *Postal Revenue.* Particulars concerning this branch of revenue for each of the financial years from 1920–21 to 1924–25 are contained in the following table :—

COMMONWEALTH POSTAL REVENUE, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Private Boxes and bags ..	40,044	42,606	44,542	48,132	52,301
Commission—					
Money orders and postal notes	169,256	172,861	179,571	181,663	192,809
Telegraphs	1,369,922	1,375,584	1,405,664	1,426,542	1,481,784
Telephones	2,431,980	2,724,552	2,983,069	3,301,651	3,599,864
Postage	4,142,781	4,682,964	4,913,162	4,362,660	4,333,461
Radio Receipts	12,052	25,995	7,711	4,012	18,291
Miscellaneous	222,534	296,092	258,554	432,361	365,976
Total	8,388,569	9,320,654	9,792,273	9,757,021	10,044,486

The decrease of £550,502 in 1923–24 as compared with the preceding year under the sub-head "Postage" was due to reductions in postal rates. The installation of additional telephones was responsible for the large increase of £298,213 under the item "Telephones" in 1924–25. The item "Miscellaneous" includes a subsidy from the Commonwealth Bank for the conduct of Savings Bank business, payments by the United Kingdom in respect of mail transit rates, and certain allowances.

(b) *Railway Revenue.* The Commonwealth Government is responsible for four lines —the Kalgoorlie–Port Augusta, the Port Augusta–Oodnadatta, the Darwin–Katherine River, and the Federal Capital Territory line. The appended table shows the amounts paid into the credit of the Consolidated Revenue Fund on account of each of these railways for the past five years. Under an arrangement which came into effect on 1st January, 1914, the Port Augusta–Oodnadatta Railway is worked by the South Australian Government, and the Commonwealth Government receives the profit, if any, on the working, or pays the deficiency. Since 1914 there has always been a deficiency, which is met by a payment from the Commonwealth Government.

COMMONWEALTH RAILWAY REVENUE, 1920–21 TO 1924–5.

Railway.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Kalgoorlie-Port Augusta ..	221,386	201,084	215,368	215,945	254,291
Port Augusta-Oodnadatta ..	..	..	..	..	..
Darwin-Katherine River ..	12,761	14,370	14,768	16,461	29,105
Federal Capital Territory ..	1,240	1,847	(a)	(a)	3,641
Total	235,387	217,301	230,136	232,406	287,037

(a) Not available.

(c) *Commonwealth Steamships.* For the year 1924–25 the estimated earnings, including those of the detained enemy vessels, were £1,852,415, and the estimated expenditure £2,446,295, leaving a loss of £593,879 on the year's operations. Further information relative to the Commonwealth Government Line of Steamers will be found in Chapter VII., part A, Shipping.

(d) *Other Public Works and Services.* The most important items in 1919–20 were "Profit under Cornsacks Distribution Account" £130,472, and "Profit under Wool Tops Agreement" £78,273. In 1922–23, "Sale of Dyes" accounted for £13,851.

(iv) *Other Sources of Revenue.—(a) Interest, Discount, etc.* The most important investments of the Commonwealth Government from which interest is derived are—Loans to States, General Trust Funds, Loans placed in London, Fixed Deposits with the Commonwealth and other Banks, and certain advances and overdrafts. In 1924–25 they included Interest on Loans and Advances to States, £2,832,708; Interest on General Trust Fund Investments, £325,902; and Interest, Nauru Island Agreement, £87,653.

(b) *Coinage.* The Commonwealth Revenue under this head is derived from profit on coin issued, and for 1924–25 was made up of £100,034 for silver and £7,241 for bronze.

(c) *Defence.* The income from this source (which is derived from both Defence and Navy Offices) arises chiefly from sales of material and stores supplied, forfeitures, fines, costs, etc. In 1924–25, £87,249 was contributed by the Defence Department (Military), and £51,829 by the Navy Office.

(d) *Patents, etc.* This heading includes Patents, Trade Marks, Copyright and Designs. In 1924–25, £28,702 was obtained from Patents, and £10,324 from Trade Marks, Copyright and Designs.

(e) *Defence Trust Account.* This is credited with receipts from Parliamentary appropriations, and from the Departments and the public for work done and material supplied. In the year 1924–25, only the unexpended balance of Trust Fund Clothing Factory, viz., £7,413, was transferred to the Consolidated Revenue Fund, thus closing the account.

(*f*) *Unexpended Balance of London Orders.* The large amount for the year 1920–21 was due to an amendment by the Treasury of the London Account Regulations, which superseded the system of charging votes upon the remittance of amounts from the Commonwealth, and made such charge only when payment in London was actually completed. This necessitated the closing of the Trust Account for London Liabilities, and the transfer of unexpended balances to the revenue. There were no unexpended balances in the last four years.

(*g*) *Miscellaneous.* This includes several items which are either small in themselves, or not included under separate headings, as they are virtually non-recurring. Thus in 1922–23 there was a payment into revenue of £168,709 on account of Sugar—Interest on Overdraft ; in 1923–24, a sum of £195,000 being a repayment of advances to Trust Fund—Cockatoo Island Dockyard Account ; and in 1924–25, receipts under the Commerce Act amounted to £55,210.

Division III.—Expenditure.

1. **Nature of Commonwealth Expenditure.**—The disbursements by the Commonwealth Government of the revenue collected by it fell naturally, under the " book-keeping "* system, into three classes, viz. :—

(*a*) Expenditure on transferred services.
(*b*) Expenditure on new services.
(*c*) Payment to States of surplus revenue.

Of these three, only the first two were actual expenditure, the last being merely a transfer, the actual expenditure being incurred by the States. In accordance with the provisions of the Constitution, the expenditure on transferred services was, under the " book-keeping " system, debited to the several States in respect of which such expenditure was incurred, while the expenditure on new services was distributed *per capita*. Surplus Commonwealth revenue was paid to the States monthly. During the earlier years of Federation, viz., until the end of the year 1903–4, new works, etc., for transferred departments were treated as transferred expenditure, and were charged to the States on whose behalf the expenditure had been incurred. In subsequent years all such expenditure was regarded as expenditure on new services, and distributed amongst the States *per capita*. Under the arrangement, which superseded the " book-keeping " system, a specific subsidy of 25s. per head of population is made annually by the Commonwealth to the States, and there is no further debiting of expenditure to the several States.

2. **Total Expenditure.**—The total expenditure by the Commonwealth Government and the expenditure per head of population during the period 1920–21 to 1924–25 are shown in the following table :—

COMMONWEALTH EXPENDITURE, 1920–21 TO 1924–25. (*a*)

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Total	64,624,087	65,106,949	63,700,485	63,430,019(*b*)	68,336,432
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Per head	11 18 10	11 16 3	11 6 1	11 0 8	11 12 9

(*a*) Including expenditure from Trust Funds and subsidies to States.
(*b*) Excluding £4,915,754 used for Debt redemption.

The largely increased expenditure in recent years is due partly to Old-age and Invalid Pensions, but mainly to the expenditure from Revenue upon War Services and to the general rise in prices.

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* For an exposition of the " book-keeping system " see Commonwealth Year Book No. 6, page 780.

3. Details of Expenditure from Consolidated Revenue.—(i) *General.* The following table gives details of the expenditure from Consolidated Revenue during the last five years. The amounts quoted for each Department represent the expenditure incurred on behalf of that Department :—

COMMONWEALTH EXPENDITURE—CONSOLIDATED REVENUE, 1920–21 TO 1924–25.

Heads of Expenditure.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Cost of Departments—					
Governor-General	30,707	27,897	28,045	27,845	26,777
Parliament	323,359	346,192	446,464	336,012	355,257
Prime Minister	434,939	733,528	908,527	1,094,661	1,023,844
Attorney-General	132,446	148,045	162,797	162,136	169,015
Treasury	6,664,051	6,984,277	7,180,785	8,034,480	8,406,285
Trade and Customs	964,993	889,121	2,243,809	1,627,818	1,298,275
Defence	4,184,719	4,456,198	3,785,582	3,852,531	3,784,415
Postmaster-General	7,305,243	8,188,686	8,242,025	9,273,494	10,288,438
Home and Territories	746,569	695,708	526,033	522,640	524,983
Works and Railways	698,392	609,327	1,127,306	669,331	1,335,267
Health	..	172,227	155,912	167,917	187,799
Markets and Migration	..	..	..	..	869,717
Total	21,485,418	23,251,206	24,807,285	25,768,865	28,270,072
Miscellaneous—					
New Works	2,098,203	2,571,794	720,927	620,660	343,916
War Services	33,289,053	31,337,164	30,100,472	28,770,106	29,982,761
Subsidies to States	6,840,163	7,035,535	7,185,551	7,324,538	7,535,291
Interest— State Loans Act ..	911,250	911,250	886,250	945,850	1,216,253
Special Defence Provision ..	..	..	..	..	988,139
Total	43,138,669	41,855,743	38,893,200	37,661,154	40,066,360
Grand Total	64,624,087	65,106,949	63,700,485	63,430,019*a*	68,336,432

(*a*) Excluding £4,915,754 used for Debt redemption.

The amounts shown under the heading "Treasury" include payments from the Trust Fund on account of Pensions.

The items included under the above general heads are referred to in some detail in the succeeding sub-sections.

(ii) *Cost of Departments.*—(*a*) *Governor-General.* Section 30 of the Constitution enacts that, until the Commonwealth Parliament otherwise provides, there shall be payable out of the Consolidated Revenue Fund for the salary of the Governor-General an annual sum of ten thousand pounds, and a proviso is made that the salary of the Governor-General shall not be altered during his continuance in office. The total expenditure in connexion with the Governor-General and establishment for the five years 1920–21 to 1924–25 is as follows :—

EXPENDITURE.—GOVERNOR-GENERAL AND ESTABLISHMENT, 1920–21 TO 1924–25.

Details.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Salary	10,000	10,000	10,000	10,000	10,000
Governor-General's Establishment ..	13,127	11,708	11,046	10,931	9,924
Contingencies (*a*)	7,374	6,189	6,999	6,914	6,061
Interest on Commonwealth Treasury Bills	206	..	..	..	792
Total	30,707	27,897	28,045	27,845	26,777

(*a*) Represents official services outside the Governor-General's personal interests, and carried out in the main at the instance of the Government.

(*b*) *Parliament.* Under this head have been grouped all the items of expenditure connected with the Parliamentary government of the Commonwealth for the five years 1920–21 to 1924–25.

EXPENDITURE.—COMMONWEALTH PARLIAMENT, 1920–21 TO 1924–25.

Details.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Salaries of Ministers	15,368	15,300	14,598	13,569	14,408
Allowances to Senators	34,710	34,916	34,790	35,312	35,135
Allowances to Members of House of Representatives	69,133	69,395	65,275	74,359	74,628
Officers, staff, contingencies, etc. ..	51,661	63,253	61,484	61,418	60,353
Repairs, maintenance, etc.	1,686	2,529	1,800	1,894	2,284
Printing	23,810	24,912	23,108	24,244	24,323
Travelling expenses of Members and others	11,996	12,262	29,300	20,200	19,898
Insurance	342	342	342	342	342
Electoral Office	70,200	72,816	78,706	74,401	81,791
Election expenses	3,037	5,201	89,808	721	2,951
Administration of Electoral Act ..	28,477	42,548	44,703	25,576	32,437
Miscellaneous	12,939	2,718	2,550	3,976	6,707
Total	323,359	346,192	446,464	336,012	355,257

In section 66 of the Constitution, provision is made for payment out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of Ministers of State, of an annual sum which, until Parliament otherwise provides, shall not exceed £12,000. This was modified in 1915–16, when the Minister of the Navy was given separate Cabinet rank. Allowances to senators and members of the House of Representatives are also provided for in the Constitution, section 48 of which specifies that until Parliament otherwise provides, each such allowance shall consist of £400 a year reckoned from the day on which the member takes his seat. During the second session of the Parliament in 1907 an Act was passed raising the annual allowance from £400 to £600, such increase to date from 1st July, 1907. In 1920, the salaries of members of both Houses were further increased to £1,000 per annum.

(c) *Prime Minister's Department.* This Department was created during the financial year 1911–12. In addition to the Prime Minister's Office it includes the Audit Office taken from the Treasury, the Executive Council taken from the External Affairs Department, the Public Service Commissioner's Office (now the Public Service Board's Office) taken from the Home Affairs Department, and Commonwealth Shipbuilding. In 1916–17 it assumed control of the High Commissioner's Office in London, which was detached from the old External Affairs Department when the latter was merged in the Home and Territories Department. It has recently enlarged its activities by administering the affairs of the Mandated Territory of Nauru, while the control of immigration and mail services to the Pacific Islands has been transferred to other departments. The expenditure for the last five years is shown in the following table :—

EXPENDITURE.—PRIME MINISTER'S DEPARTMENT, 1920–21 TO 1924–25.

Details.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Salaries, contingencies, etc.	32,876	38,191	38,896	34,800	41,623
Executive Council	250	165	..	..	..
Audit Office	32,211	34,689	34,754	35,382	36,052
Rent, repairs, etc.	7,214	9,021	7,710	10,348	10,094
Public Service Board's Office ..	30,546	34,960	33,745	47,491	50,849
High Commissioner's Office, London ..	75,764	69,417	59,024	54,508	60,664
Australian Commissioner's Office, New York	12,215	9,353	6,466	11,489	14,875
Interest on Commonwealth Securities ..	21,620	204,316	439,054	464,071	530,006
Sinking Fund on Commonwealth Securities	433	550	31,013	48,967	48,177
Mail Service to Pacific Islands ..	43,501	49,167	46,805	52,953	(a)
Contribution to Secretariat, League of Nations	68,350	40,984	37,470	34,620	25,500
Immigration	..	72,175	69,560	66,866	(a)
Interest on Transferred Properties ..	..	30,370	30,370	29,480	29,945
Miscellaneous	109,959	140,170	73,660	203,686	176,059
Total	434,939	733,528	908,527	1,094,661	1,023,844

(a) Transferred to other Departments.

In the "Miscellaneous" vote for 1920–21, the largest single item was one of £50,371, representing the balance of the expenses in connexion with the visit of the Prince of Wales. The remaining items included £10,881 for Basic Wage Commission; £5,418 for Conferences on Coal Industry disputes; £5,802 for Commonwealth representation at Geneva Conference; and £4,000 for Imperial Mineral Resources Bureau Grant. In 1921–22 it included £49,070 for relief of distress in Europe, and £32,500 as payment to the South African Government on account of wheat. The agreement with the Amalgamated Wireless Limited for the upkeep of Coastal Stations accounted for £47,330 of the "Miscellaneous" vote in 1922–23. In 1923–24 this item was debited with £137,697, payment to Central Wool Committee in respect of wool supplied for the local manufacture of wool-tops, and £14,109, British Empire Exhibition. In 1924–25, the largest item was a further payment of £137,697 to the Central Wool Committee.

(*d*) *Attorney-General's Department.* The extra expenditure connected with this Department of late years has been caused in large measure by the extension of the Federal High Court, and an increase in the item "Patents, Trade Marks, etc." Details for the five years 1920–21 to 1924–25 are furnished hereunder :—

EXPENDITURE.—ATTORNEY-GENERAL'S DEPARTMENT, 1920–21 TO 1924–25.

Details.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Attorney-General's Office	15,558	18,358	20,010	17,949	19,555
Crown Solicitor's Office	17,879	18,248	18,829	19,478	21,997
Salaries of Justices of High Court ..	21,556	21,500	21,500	21,500	21,500
High Court expenses	12,925	12,276	13,957	14,104	13,269
Court of Conciliation and Arbitration	9,112	4,949	11,182	8,378	11,995
Rent, repairs, etc.	5,889	8,200	12,797	11,081	11,472
Patents, Trade Marks, etc.	42,389	43,602	43,973	42,935	45,598
Investigation Branch	4,244	7,496	7,904	8,905	9,184
Public Service Arbitrator's Office ..	1,036	4,524	3,604	3,955	4,027
Miscellaneous	1,858	8,892	9,041	13,851	10,418
Total	132,446	148,045	162,797	162,136	169,015

(*e*) *Treasurer's Department.* The sub-departments under the control of the Commonwealth Treasurer are the Treasury, the Pensions Department, the Taxation Office, the Supply and Tender Board, and Superannuation. Details of the expenditure of this Department for the last five years are given in the following table :—

EXPENDITURE.—TREASURER'S DEPARTMENT, 1920–21 TO 1924–25.

Details.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Treasury	61,139	56,084	50,698	51,007	54,413
Taxation Office	513,422	592,149	576,424	516,887	463,176
Pensions Office	85,016	88,687	84,535	88,405	92,999
Maternity Allowance Office	15,902	15,143	15,764	14,512	16,117
Coinage	33,981	50,785	31,979	16,273	23,836
Rent, Repairs, etc. ..	28,090	33,002	29,426	22,993	13,085
Interest on Commonwealth Securities	41,223	..	..	..	..
Miscellaneous	34,277	77,693	(*b*)279,508	130,347	61,549
Departmental Expenditure	813,050	913,543	1,068,334	840,424	725,175
Invalid and Old-age Pensions (*a*)	5,074,336	5,290,056	5,337,936	6,426,752	6,896,401
Maternity Allowance ..	700,760	690,700	688,435	670,175	688,205
Maintenance of persons in charitable institutions ..	75,905	89,978	86,080	97,129	96,504
Total	6,664,051	6,984,277	7,180,785	8,034,480	8,406,285

(*a*) Including the following amounts spent from Trust Funds :—In 1920–21, £2,900,000; in 1921–22, £4,417,704; in 1922–23, £3,204,212; in 1923–24, £3,714,287; and in 1924–25, £1,723,162. (*b*) Including Taxation Officers' Compensation, £200,000.

The increase in the departmental expenditure had been largely on account of the Taxation Office, but, during 1923–24 and 1924–25, expenditure under this item decreased by £59,537 and £53,711 respectively. The "Miscellaneous" vote for 1921–22 included a loan of £25,000 to the Returned Soldiers' Woollen Company, and £11,034 for the Royal Commission on Taxation. For 1922–23 it included a loan of £25,000 to the Returned Soldiers' Woollen Company and £200,000 Taxation Officers' Compensation. In 1923–24 it included £60,000, donation to Japanese Earthquake Fund, a loan of £21,000 to the Port Huon Fruit Growers' Association, and £10,000 to the Returned Soldiers' Woollen Company.

(*f*) *Trade and Customs.* Under this head have been included the expenditure of all the sub-departments under the control of the Minister of Trade and Customs, as well as the amounts payable as sugar and other bounties, and the expenses in connexion therewith. The administration of Patents, Trade Marks, and Copyright is now entrusted to the Attorney-General's Department, that of Quarantine to the Department of Health, and that of the Institute of Science and Industry to the Department of Markets and Migration. Particulars for the five years 1920–21 to 1924–25 are given in the following table :—

EXPENDITURE.—TRADE AND CUSTOMS DEPARTMENT, 1920–21 TO 1924–25.

Details.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Chief Office	43,861	68,677	70,037	72,238	78,159
Customs (ordinary)	460,187	477,566	439,462	503,150	531,189
Navigation	8,100	18,188	25,426	39,927	44,484
Analyst	5,663	5,794	5,829	6,039	5,854
Audit (proportion)	7,940	6,869	9,371	10,970	10,552
Quarantine	100,583	..	..	..	..
Pensions and retiring allowances ..	16,803	16,946	18,736	20,365	22,499
Rents, repairs, etc.	24,386	23,089	21,445	22,616	32,191
Sugar and other bounties ..	24,406	29,793	192,114	455,859	304,548
Inter-State Commission	3,650	..	..	..	..
Lighthouses	168,314	160,518	162,946	169,045	184,298
Interest on transferred properties ..	71,469	42,497	47,162	49,541	47,217
Interest on Commonwealth securities	3,501	1,741	4,943	8,180	13,667
Bureau of Commerce and Industry	5,160	5,000	4,659	3,484	..
Institute of Science and Industry ..	16,042	17,201	22,591	22,679	(*a*)
Miscellaneous	4,928	15,242	1,219,088	243,725	23,617
Total	964,993	889,121	2,243,809	1,627,818	1,298,275

(*a*) Transferred to Department of Markets and Migration.

The "Miscellaneous" vote in 1922–23 includes Loans for purchase of Wire Netting, £250,000, and Losses and Advances on Fruit Pools, £863,000. In 1923–24, an amount of £141,262, British Empire Exhibition, was included.

(*g*) *Defence.* The expenditure in connexion with Defence, which in 1901–2 amounted to £861,218, had by 1924–25 grown to £3,784,415. Expenditure on the Air Service is included for the first time in 1920–21. Particulars for the last five years are as follows :

EXPENDITURE.—DEFENCE, COMMONWEALTH, 1920–21 TO 1924 25.

Details.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Chief Office	125,491	150,384	89,732	96,645	103,438
Military..	1,276,531	1,386,042	1,208,005	1,289,171	1,269,799
Naval	2,367,748	2,198,268	1,942,227	1,916,384	1,842,937
Air Services	62,888	155,282	179,337	222,657	216,544
Audit (proportion) ..	17,298	15,032	14,374	17,169	9,474
Pensions and retiring allowances	2,162	2,633	2,921	2,899	2,797
Rents, Repairs, etc. ..	108,728	107,312	92,894	107,871	113,281
Interest on transferred properties	122,325	93,586	97,112	94,459	95,706
Interest on Commonwealth securities	71,433	18,776	84,756	79,823	100,162
Miscellaneous	30,115	328,883	74,224	25,453	30,277
Total	4,184,719	4,456,198	3,785,582	3,852,531	3,784,415

The large sum under "Miscellaneous" for 1921–22 includes £300,000 for compensation under the Defence Retirement Act.

(*h*) *Postmaster-General's Department.* Details of the expenditure of this Department for the last five years are given in the table hereunder :—

EXPENDITURE.—POSTAL DEPARTMENT, 1920–21 TO 1924–25.

Details.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Chief Office	30,949	33,954	37,800	46,685	48,643
Postal Department (ordinary)	6,844,979	7,722,459	7,556,391	8,121,381	8,950,694
Audit (proportion) ..	8,182	8,927	10,293	10,663	10,630
Pensions and retiring allowances	75,057	81,171	84,057	92,436	95,928
Rents, repairs, etc. ..	86,824	101,047	123,405	138,092	174,012
Interest on transferred properties	186,070	186,752	193,103	198,699	198,923
Interest on Commonwealth Securities	49,562	19,516	90,421	353,387	494,054
Sinking Fund on Commonwealth Securities ..	16,193	16,193	23,218	197,552	269,469
Miscellaneous	7,427	18,667	123,337	114,599	46,085
Total	7,305,243	8,188,686	8,242,025	9,273,494	10,288,438

The "Miscellaneous" item for 1922–23 includes £47,330 for upkeep of coastal wireless stations ; for 1923–24, £59,560 for compensation of officers retired compulsorily, and £28,999 for Superannuation ; and for 1924–25, £45,687 for Superannuation.

(*i*) *Home and Territories.* Under this Department, created in the financial year 1916–17, is placed the bulk of the old External Affairs Department (after the removal of the London office), the Census and Statistics, Meteorological and Lands and Survey Offices, taken from the old Home Affairs Department, and the Mandated Territory of New Guinea. The Darwin-Katherine River Railway is administered by the Works and Railways Department. The Shipping and Mail Services to the Pacific Islands were transferred from the Prime Minister's Department in 1924–25. The Electoral Office which is administered by this Department is for the purposes of this Chapter shown under Section (*b*) above.

EXPENDITURE.—HOME AND TERRITORIES DEPARTMENT, 1920–21 TO 1924–25.

Details.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Chief Office	21,756	21,594	21,141	24,544	27,891
Census and Statistics	17,713	18,936	20,438	19,575	23,394
Meteorological Branch ..	84,923	88,932	80,911	39,245	34,656
Lands and Survey	22,236	22,226	15,124	12,354	15,035
Papua	62,656	179,245	80,894	79,139	71,239
Rents, repairs, etc.	16,380	15,941	23,128	22,615	15,319
Northern Territory	232,011	193,950	195,886	212,469	145,685
Federal Capital Territory ..	26,828	32,741	..	..	..
Norfolk Island	3,000	3,000	3,500	3,500	3,500
Shipping and Mail Services, Pacific Islands	(*b*)	(*b*)	(*b*)	(*b*)	52,834
Interest on Commonwealth Securities (*a*)	54,032	34,280	46,843	68,226	75,226
Sinking Fund, Commonwealth Securities (*a*)	2,612	2,535	4,346	7,711	8,771
Miscellaneous	202,422	82,328	33,822	33,262	51,433
Total	746,569	695,708	526,033	522,640	524,983

(*a*) Includes Northern Territory. (*b*) Included in Prime Minister's Department.

The large "Miscellaneous" item in 1920–21 includes £149,150 special expenditure on the Census of 1921. In 1924–25, Census expenditure £11,999, and a grant of £10,000 for medical purposes in New Guinea, were included.

(*j*) *Works and Railways Department.* The extension of Commonwealth Works and Railways led, in 1916–17, to the separation of these branches from the former Home Affairs Department and the constitution of a separate Works and Railways Department. To this Department was entrusted the administration of the railways originally under the control of the old External Affairs Department. The expenditure for the last five years was as follows :—

EXPENDITURE.—WORKS AND RAILWAYS DEPARTMENT, 1920–21 TO 1924–25.

Details.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Chief Office	45,317	31,724	32,939	34,274	33,495
Kalgoorlie–Port Augusta Railway	292,168	255,776	249,289	265,293	285,912
Port Augusta-Oodnadatta Railway, and Northern Territory and Federal Capital Territory Railways	156,900	180,034	183,293	188,441	131,238
Interest on transferred properties	374	374	..	..	..
Interest on Commonwealth Securities	174,002	100,408	127,717	135,085	332,266
Sinking Fund on Commonwealth Securities	13,200	13,200	16,178	15,007	37,713
Rent, repairs, etc.	4,670	4,544	5,526	4,928	7,648
Royal Commission—Unification of Gauge	6,287	9,229	449	560	..
Main Roads Development	..	..	500,000	..	500,000
Miscellaneous	5,474	14,038	11,915	25,743	6,995
Total	698,392	609,327	1,127,306	669,331	1,335,267

(*k*) *Health Department.* This department came into existence in the financial year 1921–22. Details of expenditure are as follow :—

EXPENDITURE.—HEALTH DEPARTMENT, 1921–22 TO 1924–25.

Details.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£
Central Administration	9,601	8,486	9,898	12,432
Salaries, Contingencies, etc.	134,934	114,429	125,186	116,291
Interest on Treasury Bills	87	965	1,804	2,083
Interest on Transferred Properties	6,909	7,979	7,466	7,674
Rent and Repairs	10,065	14,858	15,292	12,697
Miscellaneous	10,631	9,195	8,271	36,622
Total	172,227	155,912	167,917	187,799

Included under the item Miscellaneous in 1924–25 is an expenditure of £22,488 in connexion with the rinderpest outbreak in Western Australia.

(*l*) *Markets and Migration Department.* This department, which was formed in the financial year 1924–25, took over various functions previously performed by other departments. Details of expenditure are as follow :—

EXPENDITURE.—MARKETS AND MIGRATION DEPARTMENT, 1924–25.

Details.	1924–25.
	£
Chief Office	1,529
Immigration	63,058
Commonwealth Institute of Science and Industry	24,796
British Empire Exhibition	13,567
Loan under Hop Pool Agreement Act	24,500
Dried Fruits Export Control	19,072
Fruit Pool Losses	154,000
Assistance to Primary Production	500,000
Interest on Commonwealth Securities	30,325
Miscellaneous	38,870
Total	869,717

(iii) *Miscellaneous.* (*a*) *New Works.* Particulars of the expenditure on new works, etc., during the last five years are given in the following table :—

EXPENDITURE ON NEW WORKS, 1920–21 TO 1924–25.

Department.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Parliament	700	2,086	..	..	..
Prime Minister	1,653	1,029	143	31,250	..
Treasury	5,832	54,242	..	..	..
Trade and Customs ..	28,103	7,249	3,609	1,675	7,887
Defence	1,097,062	1,507,758	460,734	311,323	309,277
Postmaster-General ..	940,917	940,114	221,709	240,026	..
Home and Territories ..	23,564	31,463	13,885	15,282	16,613
Works and Railways ..	372	109	..	..	..
Health	..	27,744	20,847	21,104	10,139
Total	2,098,203	2,571,794	720,927	620,660	343,916

(*b*) *War Services.* Full details concerning the expenditure from Consolidated Revenue upon War and Repatriation will be found in a later sub-section.

(*c*) *Interest—State Loans Act.* The amount of £1,216,363 is the interest on the sum of £28,087,460 borrowed by the Commonwealth in London and advanced to the States (except New South Wales). Of this amount £5,037,460 carried interest at 5 per cent., £12,750,000 at 5½ per cent., and £10,300,000 at 6 per cent.

Division IV.—Subsidy Paid to States.

1. Payments to the States.—The following table furnishes particulars of the subsidies paid to the States on account of each of the financial years 1920–21 to 1924–25 :—

COMMONWEALTH SUBSIDY PAID TO STATES, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
New South Wales ..	2,533,234	2,632,036	2,690,198	2,738,725	2,796,928
Victoria..	1,878,449	1,918,967	1,969,772	2,014,746	2,055,834
Queensland	912,628	952,728	978,673	1,005,486	1,035,791
South Australia	588,603	621,862	635,833	650,453	668,084
Western Australia ..	564,735	554,704	554,828	558,573	561,741
Tasmania	362,514	355,238	356,247	356,555	(*a*)416,913
Total	6,840,163	7,035,535	7,185,551	7,324,538	7,535,291

(*a*) Including a special payment of £61,656 income tax received by the Commonwealth in respect of prizes won on lotteries and paid to the State under Section 4 of the Tasmania Grant Act, 1924.

The amounts of subsidy given in the table are based upon an annual payment of £1 5s. per capita, with special concessions to Western Australia and Tasmania, and are in accordance with the provisions of the "Commonwealth Surplus Revenue Act" passed in 1910 which came into effect on the 1st July of that year for a period of ten years, subject to revision on the expiration thereof. This period expired on the 30th June, 1920, and it was then possible for Parliament to extend the Act for a further period, or to enter into new financial relations with the States. The "per capita" payment has been continued provisionally up to the present time.

§ 3. Trust Fund and Miscellaneous.

1. **Trust Accounts.**—The Trust Fund balances on 30th June, 1925, totalled £17,358,801, as compared with £14,323,001 for the corresponding date in the year ending 30th June, 1924. Details concerning the most important trust accounts are contained in the following table :—

COMMONWEALTH TRUST FUNDS AT 30th JUNE, 1925.

Trust Accounts.	Balance at 30th June, 1925.	Trust Accounts.	Balance at 30th June, 1925.
	£		£
Admiralty	51,889	National Debt Sinking Fund ..	4,152,992
Australian Notes and Bond Printing ..	5,000	New Guinea Agency	6,989
Australian Soldiers' Repatriation ..	60,623	Northern Territory	18,906
Australian Soldiers' Repatriation Contribution	101,581	Other Trust Moneys	1,159,385
Australian War Records Publications	18,823	Primary Production	500,000
Canned Fruit Bounty	15,124	Public Trustee	24,021
Cockatoo Island Dockyard ..	20,197	Railway Plant and Stores Suspense ..	80,328
Commonwealth Government Ships ..	33,638	Railway Provision Stores	9,159
Defence—Clothing Material	67,418	State Loans Expenses Suspense ..	38,281
Naval Construction ..	1,999,858	Superannuation Fund	722,432
Reserve	201,352	Suspense	*Dr.* 10,497
Small Arms	27,952	Taxation Officers Compensation ..	167,624
Small Arms Ammunition ..	200,564	Treaty of Peace—Clearing Office Account ..	17,334
Stores, London Liabilities ..	1,244,918	Unclaimed Militia Pay	483
Deferred Pay	439,970	War Loan Securities Repurchase ..	918,124
General Average Deposits	11,767	War Pensions	1,225,000
International Postal and Money Order	47,534	War Savings Certificates Interest ..	173,823
Invalid and Old-age Pensions ..	1,884,530	War Service Homes Insurance ..	77,287
Loans—Wire Netting	130,164	Miscellaneous	51,885
London Loans Expense Suspense ..	391,821		
Main Roads Development	349,022		
Money Order	721,500	Total	17,358,801

2. **Flotations on behalf of States.**—Act No. 17 of 1916 authorized the Treasurer to borrow £8,940,000 in the United Kingdom, and Act No. 16 of 1917 to raise £8,000,000, also to lend the amount to the several States, other than New South Wales, and, pending the borrowing of the money, to advance the amounts set forth in the Acts out of loans made by the Government of the United Kingdom to the Commonwealth. In pursuance of these Acts, £16,907,287 was distributed to the States up to 30th June, 1924. Since that date two loans of £10,300,000 and £4,909,850 have been floated in Australia. The totals so raised have been distributed as shown in the following table :—

COMMONWEALTH LOANS RAISED ON BEHALF OF STATES AS AT 30th JUNE, 1925.

State.	Amount Floated in— London.	Amount Floated in— Australia.	Total.
	£	£	£
New South Wales	..	2,981,850	2,981,850
Victoria	1,980,902	3,252,450	5,233,352
Queensland	5,515,269	1,374,980	6,890,249
South Australia	4,139,812	5,701,880	9,841,692
Western Australia	4,196,026	1,486,260	5,682,286
Tasmania	1,075,278	412,430	1,487,708
Total	16,907,287	15,209,850	32,117,137

In addition to these amounts, the Commonwealth Government has made further advances to the States for various purposes which are set out as follows, the figures representing sums outstanding at 30th June, 1925 :—

ADVANCES TO STATES AT 30th JUNE, 1925.

Advances to—	Amounts.	Total.
	£	£
Government of New South Wales—		
Settling returned soldiers	9,805,983	
Silos for wheat storage	500,000	
		10,305,983
Government of Victoria—		
Settling returned soldiers	11,794,075	
Providing employment	92,000	
Advances for Immigration	230,173	
		12,116,248
Government of Queensland—		
Settling returned soldiers	2,700,583	
Providing employment	400,000	
Forestry	71,132	
Advances for Public Works	1,250,000	
Advances for Workers' Dwellings	91,645	
		4,513,360
Government of South Australia—		
Settling returned soldiers	2,833,005	
Providing employment	28,796	
		2,861,801
Government of Western Australia—		
Settling returned soldiers	5,431,202	
Advances for Immigration	750,000	
Advances for Public Works	247,360	
Loans for Redemption purposes	254,940	
		6,683,502
Government of Tasmania—		
Settling returned soldiers	2,121,285	2,121,285
Total	..	38,602,179

3. **Surplus Revenue.**—Until the end of 1906–7, the balance of the Consolidated Revenue Fund was paid to the States. From 1907–8, until theabolition of the bookkeeping provisions of the Constitution, the States received only three-fourths of the net Customs and Excise Revenue, and the balance of the Consolidated Revenue Fund was transferred to the Invalid and Old-age Pensions Trust Account and the Naval Defence Trust Account to provide for expenditure in subsequent years. A statement of surpluses and deficiencies for the past five years is appended hereto.

COMMONWEALTH SURPLUS REVENUE, 1920–21 TO 1924–25.

Year.	Surplus.	Deficiency.	Accumulated Surplus at end of Year.
	£	£	£
1920–21	893,521	..	6,618,327
1921–22	..	209,903	6,408,424
1922–23	1,020,150	..	7,428,574
1923–24	2,587,184	..	(*a*) 10,015,758
1924–25	543,244	..	543,244

(*a*) Of this sum £4,915,755 was used in debt redemption and £5,100,003 transferred to Trust Funds.

§ 4. Commonwealth Loan Funds and Public Debt.

1. **General.**—Although it was not until 1915 that the Federal Government came into the loan market as a borrower, there had previously existed a Commonwealth Public Debt which included several items, such as the balance of the debt taken over from South Australia and the money owing to the States for transferred properties. The debt still includes the items mentioned, in addition to the General Loan Fund, the loans for military purposes, etc. In view of the large expansion of the Public Debt, and its present importance in Commonwealth public finance, the different items are treated seriatim in the following sub-sections :—

2. **Loans taken over from South Australia.**—The first portions of the debt were contracted at the beginning of 1911, when the Commonwealth assumed responsibility for the payment of interest on transferred properties (further dealt with in sub-section 4) and for the administration and the liabilities of the Northern Territory and the Port Augusta-Oodnadatta Railway. At 30th June, 1911, the debt on account of the former was £3,657,836, and on account of the latter, £2,274,486—a total of £5,932,322. As the securities fall in they are redeemed by the Commonwealth Government, the money required being taken from the Loan Fund. The item is thus constantly diminishing, and on 30th June, 1925, stood at £2,270,097, of which £1,192,419 was on account of the Northern Territory, and £1,077,678 on account of the railway.

3. **Loan Fund for Public Works, etc.**—Up to the year 1911 the Commonwealth Government had met its Public Works expenditure out of revenue. In that year, however, in view of the heavy prospective cost of the Transcontinental Railway and the Federal Capital Territory, it was decided to institute a Loan Fund similar to those of the States. The initiation of this Fund was greatly assisted by the fact that the Treasury at that time held a large quantity of gold, principally on behalf of the Australian Notes Account. Up to 30th June, 1914, the money required for loan expenditure was obtained mainly from this source at 3½ per cent., and inscribed stock of an equivalent value was created. Since the outbreak of war, the money required for the Loan Fund has been mainly obtained by the issue of Treasury Bills. The details of the expenditure for the last five years are given in the following table :—

COMMONWEALTH LOAN EXPENDITURE FOR WORKS, 1920 TO 1925.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Railways Construction—					
Trans-Australian Railway	76,009	69,072	82,500	62,506	52,113
Northern Territory	1,654	6,436	7,651	20,420	50,535
Other	4,258	8,946	12,997	33,355	211,074
Papua—Railways and Wharves	20,000	15,700	47,720	..	..
Posts and Telegraphs—					
Purchase of land	920	7,706	138,875	47,348	41,330
Construction of conduits, etc. ..	9[c]	795,085	2,059,523	3,855,673	4,495,662
Acquisition of land (*a*)—					
London	55,727	18,651	6,921	4,395	..
Perth	21,644	45,000	90,239	..	..
Federal Capital Territory	83,232	148,425	354,041	499,349	296,061
Elsewhere (*b*)	5,474	32,757	4,968	19,220	24,396
Defence Machinery; Dockyards, Cockatoo Island; Naval Bases, etc.	305,721	159,769	43,566	66,089	56,807
Ship Construction	2,999,630	3,369,118	1,815,713	626,646	312,952
General Arsenal; Small Arms, etc.; Cordite	153,083	181,095	27,525	91,796	219,271
Lighthouses	29,746	14,556	10,400	26,285	18,155
Contribution under River Murray Waters Act	56,722	112,372	176,921	235,609	192,500
Acetate of Lime Factory	2,420	..	..	..	..
Wireless Telegraphy	..	133,848	..	62,500	62,500
Immigration	..	..	199,483	203,744	181,193
Construction of Roads	..	..	217,944	31,788	..
Subscription to Capital of Oil Refining Company	25,000	75,000	50,000	100,000	93,750
Miscellaneous	36,681	52,967	36,962	82,175	33,459
Total	3,877,912	5,246,503[a]	5,383,949[e]	6,068,898	6,341,758

(*a*) Including cost of erection of buildings. (*b*) Excluding purchases for Posts and Telegraphs. (*c*) Credited by repayment. (*d*) In addition, £7,007,107 was carried to General Loan Fund Redemption Account, from which £6,185,028 was spent in redeeming Treasury Bills. (*e*) In addition, £243,135 was spent in redeeming Treasury Bills, and £4,000,000 for redemption of loans raised in London for the States.

4. Properties Transferred from States.——At the time of Federation, when the Commonwealth took over the control of a great many departments which had previously been administered by the States, a large amount of property was handed over to the Commonwealth Government. A valuation was made, with results set out in detail in Official Year Book No. 14, page 694, and the Commonwealth now pays interest at the rate of 3½ per cent. to the States on account of all the transferred properties.

Since the valuation mentioned, some transfers and retransfers have been made. The estimated value of the transferred properties for the last five years is given in the table in sub-section 7 hereinafter.

5. War Loan from the Imperial Goverment.—On the outbreak of the European war in 1914, the Commonwealth Government obtained a loan from the Imperial Government for the purpose of financing the prospective large military expenditure. At first, the arrangement was that the Imperial Government should advance the sum of £18,000,000. Subsequently further loans totalling £31,500,000 were negotiated. In addition to this capital indebtedness of £49,500,000, a further sum of £42,696,500 was due to the British Government for the maintenance of Australian troops.

Early in 1921 an arrangement was concluded with the Imperial Government, by means of which almost the entire debt (upwards of £92,000,000) was consolidated. The Commonwealth Government undertook to extinguish the debt by annual payments of approximately £5,550,000, spread over about 35 years, the payment representing 6 per cent. on the original debt. This provides for interest at nearly 5 per cent., and a sinking fund of a little more than 1 per cent., and may be regarded as a very satisfactory arrangement for the Commonwealth, since it entails only a moderate rate of interest, and provides for the ultimate extinction of nearly one-fourth of the National War Debt. The amount outstanding on 30th June, 1925, was £88,097,605, which will diminish steadily year by year owing to the operation of the sinking fund.

6. Flotation of War Loans in Australia.—In addition to the advances from the Imperial Government, the Commonwealth Government raised large amounts of money in Australia.

Full details of the seven War Loans and the first Peace Loan are given in Official Year Book No. 14. In the financial year 1920–21 a second Peace Loan was floated with a currency of 10½ years and a rate of interest of 6 per cent. In the financial year 1921–22 a third Peace Loan was floated with a currency of 9½ years and a rate of interest of 6 per cent. It was issued at 96 and matures with the second Peace Loan on the 15th December, 1930. Totals for the ten issues are given in the tables hereunder. The first table refers to the gross total :—

COMMONWEALTH WAR LOANS LOCALLY RAISED.—TOTAL TO 30th JUNE, 1925.

Local Loans.	Number of Subscribers.			Face Value of Securities.		
	Inscribed Stock.	Treasury Bonds.	Total.	Inscribed Stock.	Treasury Bonds.	Total.
	No.	No.	No.	£	£	£
Particulars ..	123,681	710,075	833,756	132,507,750	117,664,500	250,172,250

The gross proceeds amounted to £249,768,772. The next table shows the net proceeds of the loans.

COMMONWEALTH WAR LOANS LOCALLY RAISED.—NET PROCEEDS TO 30th JUNE, 1925.

Gross Proceeds.	Deductions.			Net Proceeds of Loan.
	Accrued Interest.	Flotation Expenses.	Total.	
£	£	£	£	£
249,768,772	2,787,420	762,153	3,549,573	246,219,199

7. **Commonwealth Public Debt.**—(i) *Total Debt.* Separate consideration has already been given to the items composing the Public Debt. The table appended shows the debt of the Commonwealth (apart from the States) at yearly intervals since 1921.

COMMONWEALTH PUBLIC DEBT AS AT 30th JUNE, 1921 TO 1925.

Details.	1921.	1922.	1923.	1924.	1925.
	£	£	£	£	£
Balance of loans taken over from South Australia—					
(*a*) On account of Northern Territory	2,209,294	2,209,294	2,209,169	2,208,719	1,192,419
(*b*) On account of Oodnadatta railway	1,759,003	1,742,452	1,693,745	1,670,432	1,077,678
Value of properties transferred by States	11,536,139	11,186,169	11,042,987	10,860,591	10,858,093
Inscribed Stock	8,764,716	23,764,716	23,764,716	36,227,255	42,527,255
Treasury Bills	8,094,153	2,843,125	2,843,125	5,021,545	7,247,505
War Loan from British Government ..	92,480,156	91,453,288	90,388,604	89,270,922	88,097,605
Commonwealth Internal Loans ..	232,819,660	241,879,840	241,746,090	249,751,997	245,623,618
Accrued Deferred Pay, A.I.F. ..	14,720	..	..	..	..
Loans raised on behalf of States ..	16,750,000	16,750,000	16,750,000	17,787,461	32,997,311
Gratuities	25,279,925	23,088,153	19,508,481	700,900	64,452
Miscellaneous	2,012,258	1,153,472	1,049,399	2,100,277	1,262,126
Total	401,720,024	416,070,509	410,996,316	415,600,099	430,948,062
Commonwealth Debt *per capita* ..	£73 12 9	£74 14 6	£72 5 2	£71 12 3	£72 13 7

It will be noticed that up to 1923 the amount of the Commonwealth Internal Loans falls somewhat short of the totals of the ten issues in the table immediately preceding the above. This is owning to the fact that stock to a considerable amount has been presented as payment of Estate Duty, and cancelled, the payments being accepted in accordance with the provisions of section 5 of the Commonwealth Inscribed Stock Act 1915. The increase in 1923–24 was due to the issue of a conversion loan to provide for the redemption or conversion of War Loan and War Gratuities falling due this year.

(ii) *Place of Flotation.* The loans taken over from South Australia, which constituted the first portion of the Federal Public Debt, included both London and Australian securities. The presence in the Treasury of a large holding of gold, and the moderate rate of interest ruling on gilt-edged securities, made the conditions in 1911 and for some little time afterwards very favourable for the flotation of local loans. London securities were redeemed as they fell due, and replaced by the 3½ per cent. stock of the Loan Fund. Consequently, up to 1914 the amount of the securities repayable in London fell steadily, and the amount repayable in Australia rose rapidly. In 1915 the military loan from the Imperial Government caused a sharp rise in the amount of the securities repayable in London, which was maintained in the two following years. This was, however, more than offset by the flotation of the local war loans. The appended table gives particulars of Commonwealth loans outstanding in each of the last five years which had been floated in London and Australia respectively. A separate column is devoted to the cost of the transferred properties, which, for obvious reasons, it is impossible to allocate.

COMMONWEALTH PUBLIC DEBT.—PLACE OF FLOTATION, 1921 TO 1925.

At 30th June—	Payable in—		Value of Transferred Properties.	Total.
	London.	Australia.		
	£	£	£	£
1921	117,322,199	272,861,686	11,536,139	401,720,024
1922	131,278,780	273,605,560	11,186,169	416,070,509
1923	126,165,389	273,787,939	11,042,988	410,996,316
1924	142,524,394	262,215,114	10,860,591	415,600,099
1925	146,117,023	273,972,946	10,858,093	430,948,062

(iii) *Amount of Debt at Various Rates of Interest.* When the first debt was taken over from South Australia, it consisted mainly of securities bearing interest varying from 3 per cent. to 4 per cent., the average rate of interest for the first year being £3 12s. 4d. For the first three years the increase in the debt was due almost entirely to the expansion of the 3½ per cent. stock of the Loan Fund, consequently the average rate of interest fell steadily, until on 30th June, 1914, it stood at £3 11s. 10d. Then came the loans for military purposes, and the fall in the average rate was ultimately converted into a rise which was steadily maintained until at 30th June, 1922, the average rate stood at £4 19s. 9d. At the 30th June, 1923, however, the average rate had fallen to £4 19s. 3d. per cent., but by the 30th June, 1925, it had risen to £5 0s. 10d. per cent.

The accompanying table gives particulars of rates of interest for the five financial years ended 30th June, 1925 :—

COMMONWEALTH PUBLIC DEBT.—RATES OF INTEREST, 1921 TO 1925.

Rates of Interest.	At 30th June—				
	1921.	1922.	1923.	1923.	1924.
%	£	£	£	£	£
3	35,063	35,063	35,060	35,063	35,063
3½	15,469,528	15,119,558	14,976,377	14,793,980	14,791,482
£3/12/3 ..	720,411	703,860	655,153	631,840	576,288
3¾	833,870	833,870	833,745	833,295	833,295
3⅞	..	..	..	..	375,000
4	8,304,433	5,053,405	9,053,405	5,504,903	5,504,903
4½	126,769,038	122,093,692	120,835,510	116,908,700	113,520,010
4¾	..	..	..	..	6,000,000
£4/18/4 ..	92,480,156	91,453,288	90,388,604	89,270,922	88,097,605
5	64,576,210	61,280,220	67,298,328	82,400,498	81,125,491
5¼	29,279,925	27,088,153	19,508,481	700,900	..
5½	12,750,000	12,750,000	12,750,000	12,750,000	12,750,000
5¾	2,000,000	..	..	..	..
6	48,501,390	79,659,400	74,661,653	91,578,657	107,218,818
Overdue ..	..	..	..	191,341	120,107
Total ..	401,720,024	416,070,509	410,996,316	415,600,099	430,948,062
Average rate of interest ..	£4/17/11	£4/19/9	£4/19/3	£5/0/1	£5/0/10

(iv) *Amount of Interest Payable.* A table is appended showing the amounts payable as interest on the Commonwealth Public Debt as at 30th June in the years 1921 to 1925 inclusive. The rapid increase is due not only to the great expansion of the War Loan Fund, but also to the high rate of interest on recent loans.

COMMONWEALTH PUBLIC DEBT.—INTEREST PAYABLE IN LONDON AND AUSTRALIA, AS AT 30th JUNE.

30th June —	Payable in—			Total.
	London.	Australia.		
		Loans.	Transferred Properties.	
	£	£	£	£
1921	5,993,884	13,281,175	403,765	19,678,824
1922	6,677,781	13,630,843	391,516	20,700,140
1923	6,413,668	13,591,968	386,505	20,392,141
1924	7,248,400	13,131,877	380,121	20,760,398
1925	7,409,387	13,943,932	380,033	21,733,352

(v) *Dates of Maturity.* The dates of maturity of the several portions of the Commonwealth debt are shown hereunder. The Commonwealth Government has refrained from issuing interminable stock, although as regards about 3 per cent. of the debt no definite date of maturity had been assigned on 30th June, 1925. It will be noticed that about £190,000,000 falls due in the space of five years 1925 to 1929, the bulk of this being represented by the balance of the first eight internal loans. While the actual dates of maturity extend from 1925 to 1972, or a period of 47 years, the average period till maturity is only 6½ years.

COMMONWEALTH PUBLIC DEBT.—DUE DATES OF AMOUNTS OUTSTANDING ON 30th JUNE, 1925. (*a*)

Due Dates.	Amounts.	Due Dates.	Amounts.
	£		£
1925	65,546,510	1939	151,448
1926	8,027,844	1941	15,000,000
1927	89,990,388	1945	22,500,000
1928	22,741,860	1948	10,411,850
1929	2,823,150	1960	6,000,000
1930	73,708,100	1972	3,764,716
1933	39,387	Indefinite	1,774,469
1934	3,869,068	Annual Repayments ..	88,097,605
1935	4,630,942	Transferred Properties ..	10,858,093
1936	993,056		
1937	1,200	Total	430,948,062
1938	18,376		

(*a*) Those loans in the case of which the Government has the option of redemption during a specified period have been in each case classified according to the latest date of maturity.

The graphs accompanying this chapter illustrate the rise in the revenue, public debt and taxation of the Commonwealth and States since 1902, the year 1901–2 being the first complete financial year since Federation.

(vi) *Sinking Fund.* At an early stage of its public debt experience the Commonwealth Government established a sinking fund against most of the securities which constitute its public debt. Part of the inscribed stock issued for works purposes carried a sinking fund of 5 per cent., and the remainder one of ½ per cent. The internal issues carried sinking funds, partly of ½ per cent., and partly of 1 per cent. The War Savings Certificates carried a sinking fund of ½ per cent., and the Northern Territory and Port Augusta–Oodnadatta Railway loans one of ¼ per cent. These sinking funds were invested partly in Treasury Bills, partly in Commonwealth Inscribed Stock, and partly in Bonds (War Issues).

(vii) *National Debt Sinking Fund.* This fund was created by virtue of the National Debt Sinking Fund Act 1923, No. 5 of 1923, which was assented to on the 11th August, 1923. Provision is made therein for the merging of the Loans Sinking Fund, the Northern Territory Sinking Fund, and the Port Augusta Railway Sinking Fund into the National Debt Sinking Fund, the Loans Sinking Fund Act of 1918 being repealed. This Act also provides for the payment annually to the Fund of the sum of £1,250,000, for the payment thereto of a sum equal to 10 shillings per cent. of the net debt created, also a sum equal to £5 per cent. of debt redeemed and cancelled by the Commission in pursuance of the Act. In addition, there is to be paid to the Fund repayments of advances from Loan Fund made to States and to Territories under the authority of the Commonwealth ; of advances for the erection of wheat silos ; of advances under the Nauru Island agreement ; of advances for such purposes as are prescribed ; of purchase money and repayments of advances under the War Service Homes Act ; and unexpended balances of the Loan Fund. The provision as to payment of £5 per cent. to the Fund does not, however, apply to these repayments, purchase money, and unexpended balances. The Fund also benefits by half the net profits derived by the Commonwealth Bank of Australia on or after the first day of July, 1923, in place of the payment hitherto made to the Bank Redemption Fund.

The Act was amended in 1924 to provide for additional payments being made to the Fund in respect of expenditure from the Loan Fund by the Postmaster-General's Department.

Further amendments made by the National Debt Sinking Fund Act 1925, provide that reparation moneys received under the Treaty of Peace with Germany, and Sinking Fund contributions received from the States in respect of loans raised for them by the Commonwealth, shall be paid into the National Debt Sinking Fund.

The National Debt Commission was created for the purpose of taking general control of all Sinking Fund moneys, and of deciding when and how these moneys shall be invested or used for the redemption of the debt. The situation of the Sinking Funds, as at 30th June, 1923, is set out in the accompanying table :—

COMMONWEALTH PUBLIC DEBT.—SINKING FUNDS, 1919 TO 1923.

At 30th June—	Total Accumulation to date.	Total Securities Cancelled to date.	Balance Available.
	£	£	£
1919 ..	3,740,824	1,636,621	2,104,203
1920 ..	5,139,281	2,969,980	2,169,301
1921 ..	8,391,349	7,386,822	1,004,527
1922 ..	10,292,881	9,335,129	957,752
1923 ..	11,756,992	9,606,739	2,150,253

The old Sinking Funds were merged in the National Debt Sinking Fund on 11th August, 1923. Particulars of receipts and expenditure are as follow :—

COMMONWEALTH PUBLIC DEBT.—NATIONAL DEBT SINKING FUND, 1923–24 AND 1924–25.

Items.	1923–24.	1924–25.
	£	£
Cr. Brought forward	..	2,059,372
Balance transferred to fund on 11th August, 1923 ..	2,262,982	..
From Consolidated Revenue	1,430,141	3,111,216
Repayments of Sundry Loans	513,073	16,482
Purchase Money and Repayments under War Service Homes Act	675,174	746,012
Half net Profit Commonwealth Bank	61,673	130,477
Reparation Moneys	..	257,692
Interest on Investments	117,926	94,271
Total	5,060,969	6,415,522
Dr. Redemptions	3,001,597	2,262,530
Carried Forward	2,059,372	4,152,992
Total	5,060,969	6,415,522

The Imperial Government loan comes in a different category from the others, since it is being liquidated by the funding arrangement described in detail on a previous page.

§ 5. Cost of War and Repatriation.

1. **General.**—In view of the importance of the subject, a further reference is here made to the cost of the war. The general policy of the Commonwealth Government has been to pay from Consolidated Revenue all recurring charges for interest, sinking fund, pensions, and other charges consequent upon the war, and part of the expense of repatriation. On the other hand, the whole direct cost of the war and the larger proportion of the cost of repatriation have been paid from loans. The total cost from both sources to the 30th June, 1925, is set out in the following table :—

COST OF WAR SERVICES TO 30th JUNE, 1925.

Year.	From Revenue. (*a*)	From War Loan Fund.	Total.
	£	£	£
1914–15	640,218	14,471,117	15,111,335
1915–16	3,778,378	37,423,568	41,201,946
1916–17	8,427,329	53,114,237	61,541,566
1917–18	11,863,251	55,095,109	66,958,360
1918–19	21,255,101	62,192,889	83,447,990
1919–20	24,751,732	45,385,586	70,137,318
1920–21	33,286,233	24,148,501	57,434,734
1921–22	31,337,164	7,576,977	38,914,141
1922–23	30,100,472	1,762,694	31,863,166
1923–24	28,770,106	2,412,015	31,182,121
1924–25	29,982,761	975,612	30,958,373
Total Expenditure	224,192,745	304,558,305	528,751,050
Indebtedness to the Government of the United Kingdom for payments made, services rendered, and goods supplied during the war			43,398,098
War Gratuity Paid in Cash			27,471,211
Total			599,620,359

(*a*) Including the amounts spent from Trust Fund War Pensions Account.

2. **Expenditure from Revenue.**—The following table gives the details of the war expenditure from revenue for the last five years :—

WAR SERVICES EXPENDITURE FROM REVENUE, 1920–21 TO 1924–25.

Heading.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Interest	16,445,068	18,075,693	18,399,978	18,383,553	17,867,852
Sinking Fund	3,168,820	3,000,000	2,401,934	2,225,323	3,882,252
War Pensions	7,389,739	7,028,379	7,134,967	7,169,285	7,178,226
Repatriation of Soldiers and War Service Homes	3,867,707	2,239,754	1,794,105	472,696	800,653
Expeditionary Forces	(*a*)	200,000	(*a*)	(*a*)	(*a*)
Transport Services	698,052	157,884	(*a*)	(*a*)	(*a*)
Loan Conversion Expenses	..	..	183,635	254,236	3,028
Other War Expenditure payable out of Revenue	(*b*) 1,716,847	635,454	185,853	265,013	250,750
Total	33,286,233	31,337,164	30,100,472	28,770,106	29,982,761

(*a*) Paid from War Loan Fund. (*b*) Including £857,932 to make good deficiency in War Loan Fund.

3. Expenditure from War Loan Fund.—The following table gives the details of the war expenditure from loans, showing the expenditure on account of each Department, etc. :—

EXPENDITURE FROM WAR LOAN FUND, 1920–21 TO 1924–25.

Department, Etc.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Defence and Navy	599,419	(*a*). 311,530	179,149	(*a*) 179,549	(*a*) 37,869
Treasury	15,330,885	6,648,039	1,249,968	612,649	22,893
Prime Minister	1,678,775	(*a*) 11,221	(*a*) 64,548	228,352	(*a*) 15,882
Trade and Customs	(*a*) 54,602	(*a*) 158	(*a*) 23,239	4,252	..
Repatriation	6,593,924	1,247,466	480,620	1,720,768	1,007,663
Home and Territories ..	7,200	4,381	(*a*) 889	25,543	(*a*) 1,193
Works and Railways	(*a*) 7,100	..	(*a*) 58,367	..	..
Total War and Repatriation Expenditure	24,148,501	7,576,977	1,762,694	2,412,015	975,612
Redemptions—					
Gratuity Bonds cashed ..	8,035,066	2,191,772	2,866,285	(*b*) 14,561,898	661,076
Treasury Bills	..	2,000,000	..	..	..
Total Expenditure from War Loan Fund	32,183,567	11,768,749	4,628,979	16,973,913	1,636,688

(*a*) Repayment. (*b*) Including repayment of £6,000,000, advanced by Banks for payment of War Gratuities.

The large sums debited to the Treasury are mainly on account of advances to the States, and the money has been spent partly in settling soldiers on the land, and partly in providing reserve employment through Local Government Bodies. The expenditure under the heading " Repatriation " was incurred under the working of the War Service Homes Act of 1918.

§ 6. Old-age and Invalid Pensions.

1. General.—In previous issues of this work an account was given of the introduction of the old-age pension system into Australia, together with a detailed description of the Commonwealth Invalid and Old-age Pensions Act of 1908 which became operative on 1st July, 1909. (See Year Books, Nos. 3 to 8.) An amendment of this Act, assented to on 30th September, 1916, made a very important alteration. Section 24 originally enacted that the pension " shall not exceed the rate of twenty-six pounds per annum in any event, nor shall it be at such a rate as will make the pensioner's income, together with pension, exceed fifty-two pounds per annum." It was amended (*a*) by omitting the words " twenty-six pounds," and inserting in their stead the words " thirty-two pounds ten shillings ", and (*b*) by omitting the words " fifty-two pounds " and inserting in their stead the words " fifty-eight pounds ten shillings." Section 26 originally enacted that if an applicant for pension was in receipt of board or lodging, the actual or estimated value or cost thereof should be counted as income, to an extent not exceeding five shillings per week. This was amended by omitting the words " five shillings " and inserting in their stead the words " seven shillings and sixpence."

In 1919 the Act was again amended, and the rate of pension raised to £39 per annum and the maximum amount allowable to £65 per annum. The estimated value of board and lodging was raised to 10s. per week, while a further amending Act in 1923 raised the rate of pension to £45 10s. per annum and the maximum amount allowable to £78 per annum.

In 1925 an amending Act increased the rate of pension to £52 per annum and the maximum amount allowable to £84 10s. per annum from 1st October, 1925.

In 1920 special provision was made for a permanently blind person, by which the amount of pension may be at such a rate (not exceeding £39) per annum, as will make his income, together with the pension, equal to an amount not exceeding £221 per annum or such other amount as is declared to be a basic wage.

2. **Old-age Pensions.**—(i) *Summary, 1925.* Details regarding Old-age Pensions as at 30th June, 1925, are as follows :—

OLD-AGE PENSIONS.—SUMMARY, 1925.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Total.
Claims examined during year ended 30th June, 1925 ..	6,862	4,394	2,167	1,192	1,034	886	16,535
Claims rejected	736	266	377	70	109	56	1,614
Claims granted	6,126	4,128	1,790	1,122	925	830	14,921
Transfers from other States	616	561	166	256	131	118	1,848
Existing 30th June, 1924 ..	43,743	32,603	14,717	10,410	6,099	5,482	113,054
	50,485	37,292	16,673	11,788	7,155	6,430	129,823
Deduct—							
Deaths	3,361	2,461	1,096	785	411	386	8,500
Cancellations and transfers to other States ..	1,532	986	457	348	296	188	3,807
	4,893	3,447	1,553	1,133	707	574	12,307
Old-age Pensions existing on 30th June, 1925 ..	45,592	33,845	15,120	10,655	6,448	5,856	117,516

(ii) *Sexes of Pensioners.* Of the 117,516 persons in receipt of pensions at 30th June, 1925, 47,048 (or 40 per cent.) were males, and 70,468 (or 60 per cent.) were females. Details for the several States are as follows :—

OLD-AGE PENSIONS.—SEXES OF PENSIONERS, 1925.

State.	Males.	Females.	Total.	(a)Masculinity.
New South Wales	19,024	26,568	45,592	−16.55
Victoria	12,713	21,132	33,845	−24.88
Queensland	6,525	8,595	15,120	−13.62
South Australia	3,786	6,869	10,655	−29.93
Western Australia	2,759	3,689	6,448	−14.42
Tasmania	2,241	3,615	5,856	−23.46
Total	47,048	70,468	117,516	−19.93

(a) Excess of males over females in each 100 of total pensioners. It will be noted that in every State there is an excess of female pensioners.

(iii) *Ages and Conjugal Condition of Pensioners.* The recorded ages of the 14,921 persons to whom pensions were granted during the year 1924–25 varied considerably, ranging from 2,471 at age 60 to two at age 95. Particulars for quinquennial age-groups are as follows :—

OLD-AGE PENSIONS GRANTED 1924-25—AGES AND CONJUGAL CONDITION OF PENSIONERS.

Age Groups.	Males.				Females.				Grand Total.
	Single.	Married.	Widowed.	Total.	Single.	Married.	Widowed.	Total.	
60–64 ..	292	651	159	1,102	560	2,415	2,137	5,112	6,214
65–69 ..	1,038	2,419	806	4,263	172	765	606	1,543	5,806
70–74 ..	279	717	291	1,287	68	253	277	598	1,885
75–79 ..	73	204	142	419	23	78	160	261	680
80–84 ..	19	54	70	143	9	24	85	118	261
85–89 ..	3	14	21	38	3	3	14	20	58
90 and over ..	2	3	4	9	..	..	8	8	17
Total ..	1,706	4,062	1,493	7,261	835	3,538	3,287	7,660	14,921

3. **Invalid Pensions.**—(i) *Summary, 1925.* Details as at 30th June, 1925, are given hereunder :—

INVALID PENSIONS.—SUMMARY, 1925.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
Claims examined during year ended 30th June, 1925 ..	3,016	2,369	1,295	460	681	410	8,231
Claims rejected	720	474	401	75	260	128	2,058
Claims granted	2,296	1,895	894	385	421	282	6,173
Transfers from other States..	166	130	66	62	25	19	468
Existing 30th June, 1924 ..	17,514	12,220	5,882	2,731	2,250	2,020	42,617
	19,976	14,245	6,842	3,178	2,696	2,321	49,258
Deduct—							
Deaths	938	829	353	192	162	144	2,618
Cancellations and Transfers to other States ..	663	466	266	122	142	141	1,800
	1,601	1,295	619	314	304	285	4,418
Invalid Pensions existing 30th June, 1925	18,375	12,950	6,223	2,864	2,392	2,036	44,840

(ii) *Sexes of Pensioners.* Of the 44,840 persons in receipt of invalid pensions on 30th June, 1925, 20,145, or 45 per cent., were males, and 24,695, or 55 per cent., were females. Details for the several States are as follows :—

INVALID PENSIONS.—SEXES OF PENSIONERS, 1925.

State.	Males.	Females.	Total.	(*a*) Masculinity.
New South Wales	8,073	10,302	18,375	−12.08
Victoria..	5,973	6,977	12,950	−7.75
Queensland	3,018	3,205	6,223	−3.00
South Australia	1,039	1,825	2,864	−27.44
Western Australia	1,166	1,226	2,392	−2.51
Tasmania	876	1,160	2,036	−13.95
Total	20,145	24,695	44,840	−10.15

(*a*) Excess of males over females in each 100 of total pensioners.

(iii) *Ages and Conjugal Condition of Pensioners, 1925.* The recorded ages of the 6,173 persons to whom invalid pensions were granted during the period under review varied from 16 to 78. The following table gives particulars of those up to age 20, and in decennial age-groups after age 20 :—

INVALID PENSIONS.—AGES AND CONJUGAL CONDITION OF PENSIONERS, 1925.

Age Groups.	Males.				Females.				Grand Total.
	Single.	Married.	Widowed.	Total.	Single.	Married.	Widowed.	Total.	
16–19 ..	284	..	..	284	291	..	1	292	576
20–29 ..	302	58	2	362	395	23	4	422	784
30–39 ..	178	238	10	426	218	81	48	347	773
40–49 ..	213	446	38	697	208	190	200	598	1,295
50–59 ..	353	685	101	1,139	242	425	532	1,199	2,338
60–69 ..	55	126	28	209	12	52	67	131	340
70–79 ..	8	27	15	50	4	2	11	17	67
Total ..	1,393	1,580	194	3,167	1,370	773	863	3,006	6,173

4. **Cost of Administration.**—Under the State régime the cost of administration differed considerably in the several States, and for 1908–9 represented in New South Wales 4.17 per cent. of the amount actually paid in pensions. In Victoria for the same year the corresponding percentage was 0.70. During the year 1924–25 the total cost to the Commonwealth of administering the Old-age and Invalid Pensions Department was £94,486, or about 1.4 per cent. of the amount actually paid in pensions. Details concerning the cost of administration for 1924–25 are as follows :—

OLD-AGE AND INVALID PENSIONS.—COST OF ADMINISTRATION, 1924–25.

Heading.	Amount.
	£
Salaries	42,313
Payments to State Governments and payment of commission to Postmaster-General's Department, at 11s. 6d. per £100 paid	36,599
Postage and telegrams	3,990
Medical examinations	5,049
Other expenses	6,535
Total	94,486

The actual sum disbursed in Old-age and Invalid Pensions in the financial year 1924–25, apart from the cost of administration and exclusive of the amount paid to asylums for the maintenance of pensioners, was £6,896,401.

5. **Summary.**—The following table gives detailed statistical information concerning the working of the Act for the last five years :—

OLD-AGE AND INVALID PENSIONS.—SUMMARY, AUSTRALIA, 1921 TO 1925.

Financial Year ended 30th June—	Number of Pensioners.			Amount Paid in Pensions.	Amount Paid to Asylums for Maintenance of Pensioners.	Total Payment to Pensioners and Asylums.	Cost of Administration.	Cost of Administration per £100 paid to Pensioners and Asylums.			Average Fortnightly Pension on last day of Financial Year.	
	Old-age.	Invalid.	Total.									
				£	£	£	£	£	s.	d.	s.	d.
1921	102,415	37,981	140,396	5,074,336	75,905	5,150,241	88,271	1	14	3	28	9
1922	105,096	39,019	144,115	5,290,056	89,978	5,380,034	93,608	1	14	10	28	9
1923	107,389	40,064	147,453	5,337,936	86.080	5,424,016	87,910	1	12	5	28	9
1924	113,054	42,617	155,671	6,426,752	97,129	6,523,881	92,366	1	8	4	33	9
1925	117,516	44,840	162,356	6,896,401	96,504	6,992,905	94,486	1	7	0	33	8

§ 7. Maternity Allowance.

During the session of 1912 the Federal Parliament passed an Act (assented to on 10th October, 1912) providing for the payment of maternity allowances. The scope and main provisions of the Act are given in Year Book No. 14, p. 1047. The most important conditions are that the sum of five pounds is payable in the case of each confinement resulting in the birth of a viable child whether such child was born alive or dead. The mother must be a native of the Commonwealth, or intend to settle permanently therein. No payment is made in the case of an aboriginal or an Asiatic.

The following table gives a summary in connexion with the working of the Maternity Allowance Act for the years 1921 to 1925 :—

MATERNITY ALLOWANCE.—SUMMARY, 1921 TO 1925.

Year.	Claims Paid.	Claims Rejected.	Amount Paid.	Cost of Administration.	Cost per £100 of allowance paid.		
			£	£	£	s.	d.
1920–21 . .	140,152	622	700,760	16,173	2	6	2
1921–22 . .	138,140	520	690,700	15,441	2	4	9
1922–23 . .	137,687	421	688,435	16,008	2	6	6
1923–24 . .	134,035	432	670,175	14,770	2	4	1
1924–25 . .	137,641	455	688,205	16,425	2	7	9

§ 8. War Pensions.

1. **General.**—An Act for the provision of war pensions was passed in 1914 and amended in 1915 and 1916. Its scope can be determined by the following extract from section 3. " Upon the death or incapacity of any member of the forces whose death or incapacity results, or has resulted, from his employment in connexion with warlike operations in which His Majesty is, or has since the commencement of the present state of war been engaged, the Commonwealth shall, subject to this Act, be liable to pay to the member or his dependents, or both, as the case may be, pensions in accordance with this Act."

2. **Number of Pensioners.**—The following table shows the number of pensioners and the places where payments were made at the 30th June, 1925 :—

WAR PENSIONS.—NUMBER OF PENSIONERS, 1925.

Where Paid.	Incapacitated Members of the Forces.	Dependents of— Deceased Members.	Dependents of— Incapacitated Members.	Total.
New South Wales	23,966	11,570	40,440	75,976
Victoria	23,834	13,321	44,598	81,753
Queensland	7,905	3,760	13,505	25,170
South Australia	4,154	3,654	7,734	15,542
Western Australia	7,464	3,621	14,053	25,138
Tasmania	2,936	1,731	6,112	10,779
London	1,564	4,809	2,909	9,282
South Africa	48	45	62	155
New Zealand	230	251	267	748
Other Overseas	27	5	22	54
Total ..	72,128	42,767	129,702	244,597

3. **Expenditure on War Pensions, 1925.**—The expenditure on war pensions for the year ended 30th June, 1925, is given in the table hereunder :—

WAR PENSIONS.—EXPENDITURE, 1924–25.

Where Paid.	Amount.	Where Paid.	Amount.
	£		£
New South Wales	2,456,746	London and elsewhere ..	336,444
Victoria	2,090,242		7,146,864
Queensland	782,894	Payments in Australia in respect of other countries	324,918
South Australia	465,892		7,471,782
Western Australia	719,612	Less amounts from other countries, including payments by contra ..	293,556
Tasmania	295,034	Total ..	7,178,226

4. Cost of Administration.—The cost of administration in 1924–25 was £144,349, or 2.0 per cent. on the total amount paid in pensions, made up as follows :—

WAR PENSIONS.—COST OF ADMINISTRATION, 1924–25.

Items.	Total.
	£
Salaries	73,089
Postage and telegrams	2,722
Medical examinations	3,861
Services of Registrars, Police, and Postal Officials	44,101
London Office	6,099
Fees for State Boards	2,704
Miscellaneous	11,773
Total	144,349

§ 9. Commonwealth Public Service Superannuation Fund.

This Fund, which was inaugurated on the 20th November, 1922, is maintained by contributions of officers of Parliament, of employees of the Commonwealth Public Service and the Defence Department, and by payments from the Consolidated Revenue—the latter being made when the officers retire on pension. Full particulars as to the benefits etc., will be found in Official Year Book No. 18, page 383.

The number of contributors to the fund at 30th June, 1925, was 28,024, viz., 24,781 males and 3,243 females, and the average pension contributed for was £103 3s. per annum.

For the year ended 30th June, 1925, receipts were £419,419, of which £316,182 represented employees' contributions, £68,661 from the Consolidated Revenue, and £33,303 from interest. Payments amounted to £101,316, including £76,794 paid in pensions. Of the balance of £722,432 which remained on hand on the 30th June, 1925, £700,603 was invested in Commonwealth Inscribed Stock.

Pensions in force on the 30th June, 1925, numbered 777 with an annual liability of £56,501, of which £46,445 represents the share payable from the Consolidated Revenue.

B. STATE FINANCE.

§ 1. General.

1. Functions of State Governments.—In comparing the financial returns of the States allowance must be made for the various functions discharged by the respective Governments, and for local conditions in each case. Direct comparisons of expenditure are difficult, owing to the fact that functions which in one State are assumed by the Central Government are in another relegated to local governing bodies, and that costly developmental work may, under certain conditions, be not only economically justifiable, but may be essential to progress, while parsimonious expenditure may be an economic blunder. A large expenditure may, therefore, be an indication either of gross extravagance and bad economy on the one hand, or of healthy progress and good economy on the other. Similarly, as regards revenue, imposts which in some States are levied by the Central Government, are in others dealt with locally. Care, therefore, is needed in instituting comparisons, and the particulars contained in this chapter should be read in connexion with those contained in the chapter dealing with Local Government. In many respects, moreover, the budgets of the Australian Governments differ materially from those of most European countries, owing to the inclusion therein of the revenue and expenditure of departments concerned in rendering public services, such for instance as railways, tramways, water supply, etc., which in other countries are often left to private enterprise.

2. Accounts of State Governments.—The various financial transactions of the States are in each case concerned with one or other of three Funds—the "Consolidated Revenue Fund," the "Trust Funds," and the "Loan Funds." All revenue collected by the State is placed to the credit of its Consolidated Revenue Fund, from which payments are made under the authority of an Annual Appropriation Act passed by the Legislature, or by a permanent appropriation under a special Act. The hypothecation of the revenue from a specific tax to the payment for some special service is not practised in Australia, all statutory appropriations ranking on an equality as charges on the Consolidated Revenue Fund. The Trust Funds comprise all moneys held in trust by the Government, and include such items as savings' banks funds, sinking funds, insurance companies' deposits, etc. The Loan Funds are debited with all loan moneys raised by the State, and credited with the expenditure therefrom on public works or other purposes.

3. Inter-relation of Commonwealth and State Finance.—The principal alteration in State finance brought about by Federation was that the States transferred to the Commonwealth the large revenue received by the Customs and Postal Departments, and were relieved of the expenditure connected with these and the Defence Departments, while, in their place, a new item of State revenue was introduced, viz., the payment to the States of a Commonwealth subsidy. With regard to this, an important development in the financial relations of the Commonwealth and State Governments was discussed at the Premiers' Conference of May, 1923. The main problem for settlement was that arising from the raising and allocation of the revenues of the Commonwealth and States. The Conference aimed at the termination of the present arrangement under which the Commonwealth pays to the States on a *per capita* basis part of the revenue which it collects; concurrently it was hoped to simplify the entire taxation systems of Australia.

The Commonwealth Prime Minister submitted a scheme intended to secure the attainment of both of these objects, but it did not prove acceptable to the State Ministers, who put forward counter-proposals for the complete retirement of the Commonwealth from the field of income taxation. The States were willing on that condition to relinquish the capitation payments and to contribute to the Commonwealth Treasury sums to cover any Commonwealth loss entailed under the proposals.

As Commonwealth Ministers could not accept the offer of the States, the Prime Minister proposed that the Commonwealth should vacate the field of income taxation so far as it related to individuals, but should retain the right to tax companies up to a maximum limit of 2s. 6d. in the £1. As a set-off against this the Commonwealth would cease the payment to the States of the capitation allowances and the interest on the transferred properties. Before completing the new scheme it would be necessary to ascertain the exact value of the field to be vacated by the Commonwealth, because certain cash payments to be made by the Commonwealth to the States to save embarrassment of State finances could not be calculated until that value was ascertained.

These suggestions were much more favourably received, and ultimately five of the States—New South Wales dissenting—agreed to accept the principle of the new Commonwealth proposals.

The statistics relating to income tax were carefully investigated, and it was found that figures on which to base payments to the States would not be available for some time. The operation of the scheme was therefore deferred for one year. In June, 1924, the scheme was again considered by the Commonwealth Government, but owing to the continuance of opposition the operation of the proposals was further postponed until early in the year 1926. Meanwhile efforts were made to arrange for one collecting authority for both State and Federal income taxes. Agreements were made between the Commonwealth, on the one hand, and all the States except Western Australia, on the other, under which the State taxation officers collect both taxes, except where the Commonwealth incomes are derived from two or more States. In Western Australia there has been for some years one collecting authority only—the Commonwealth.

Provision for the taking over by the Commonwealth of certain of the public debts of the States is made in section 105 of the Constitution, and a proposed law extending this provision to the whole of the State indebtedness, which passed both Houses of the Federal Legislature by the statutory majority, was submitted to a referendum at the election in April, 1910, and received the requisite endorsement by the electorate. No action has, however, been taken in connexion therewith.

§ 2. State Consolidated Revenue Funds.

Division I.—Revenue.

1. **General.**—The principal sources of State revenue are :—

(*a*) Taxation.
(*b*) The public works and services controlled by the State Governments.
(*c*) Sale of and rental from Crown lands.
(*d*) The Commonwealth subsidy.
(*e*) Miscellaneous sources, comprising fines, fees, interest, etc.

Of these sources, that yielding the largest revenue for the States as a whole is the group of public works and services, the principal contributor being the Government railways and tramways. Next in magnitude comes Taxation, followed in order by the Commonwealth Subsidy and Land Revenue.

2. **Revenue Received.**—The following table furnishes particulars of the total amounts and the amounts per head of consolidated revenue received by the several States during the five years 1920–21 to 1924–25 :—

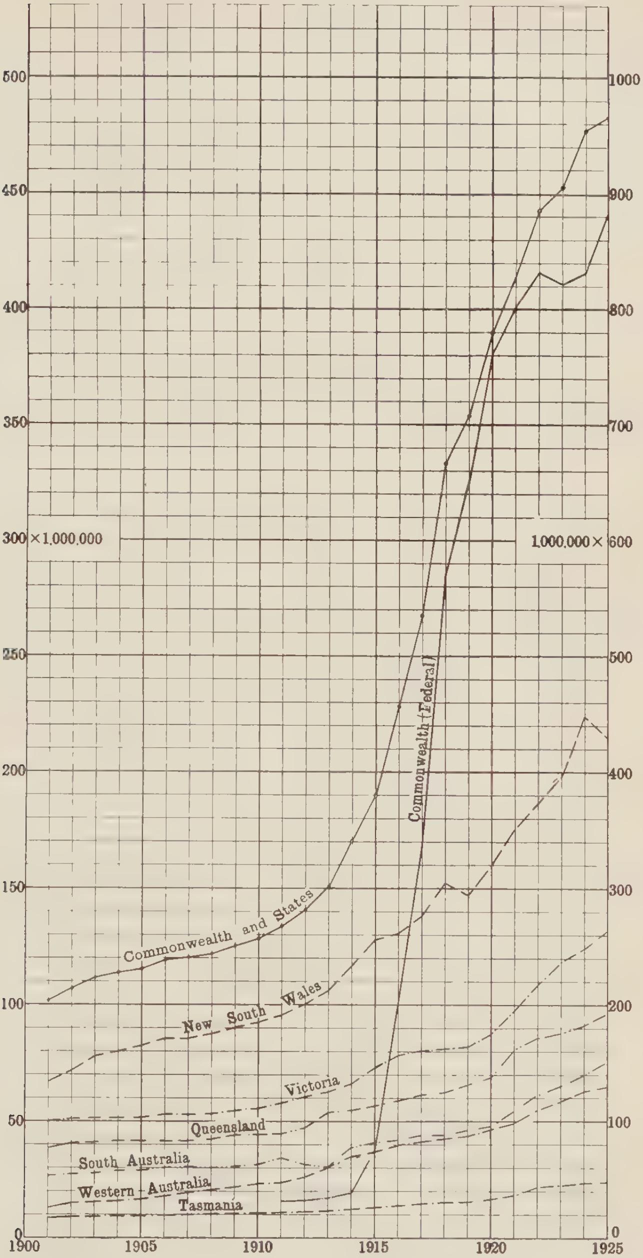
STATE CONSOLIDATED REVENUE, 1920–21 TO 1924–25.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
				TOTAL COLLECTIONS.			
	£	£	£	£	£	£	£
1920–21	34,031,396	19,054,475	12,601,031	7,151,366	6,789,565	2,105,449	81,733,282
1921–22	35,637,820	20,357,733	12,311,378	7,771,752	6,907.107	2,181,395	85,167,185
1922–23	36,145,944	21,634,677	12,599,403	8,431,700	7,207,492	2,174,062	88,193,278
1923–24	37.351,809	23,075,968	13,428,039	8,932,340	7,865,595	2,447,677	93,101,428
1924–25	38,822,588	24,304,887	14,897,256	9,733,038	8,381,446	2,762,013	98,901,228
				PER HEAD OF POPULATION.			
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1920–21	16 5 5	12 9 5	16 15 9	14 11 4	20 9 10	9 17 11	15 2 1
1921–22	16 15 0	13 2 7	16 0 6	15 9 5	20 11 6	9 19 10	15 9 2
1922–23	16 12 8	13 12 1	15 19 6	16 8 7	20 19 7	9 18 7	15 13 1
1923–24	16 17 8	14 3 11	16 11 1	17 0 6	22 4 7	11 3 6	16 3 10
1924–25	17 4 5	14 13 4	17 16 10	18 1 6	23 0 4	12 13 7	16 16 9

During the four years from 30th June, 1921, to 30th June, 1925, the aggregate revenue of the States increased by no less a sum than £17,167,946, or about 21 per cent. Increases were in evidence in all the States, the largest being that of £5,250,412 in Victoria. This general advance is the more notable since, during recent years, a smaller amount has been received from the Commonwealth in the way of subsidy than was the case up to 1910.

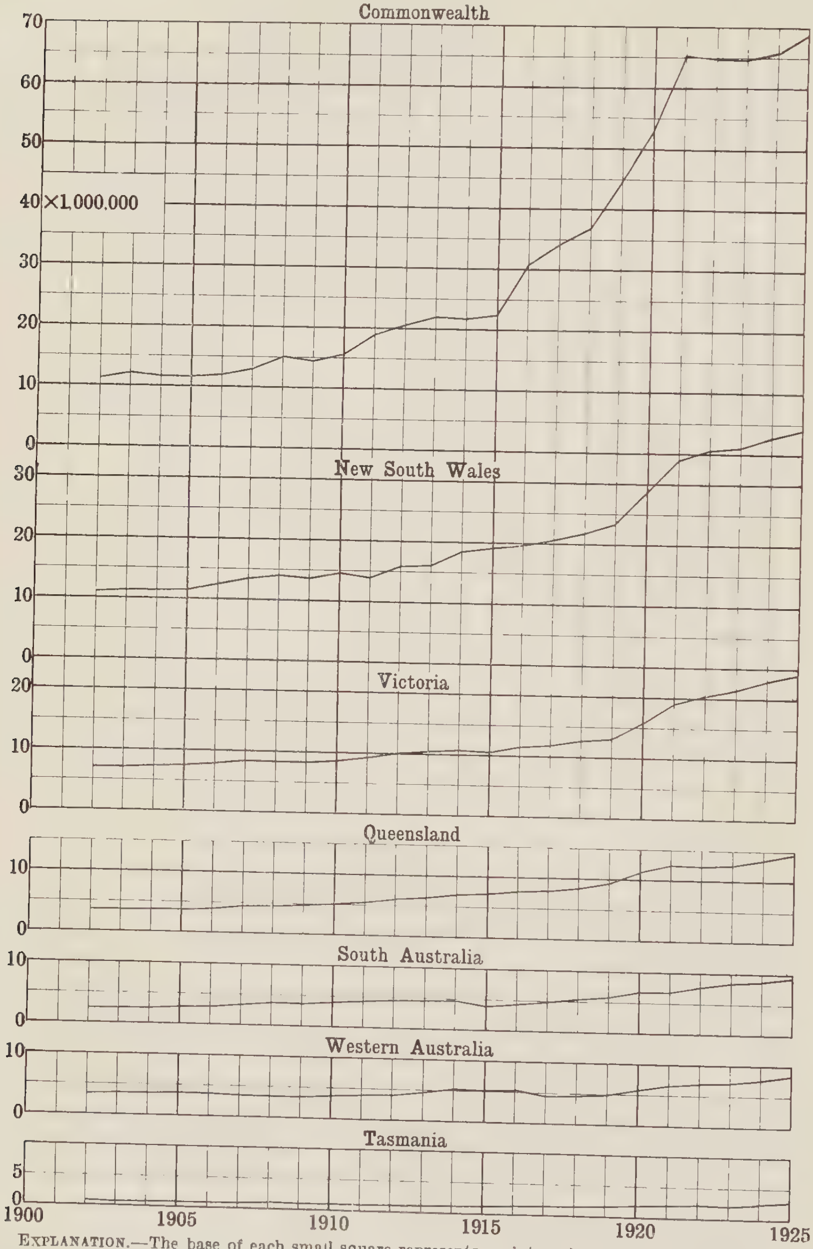
There has been a marked increase in the collections per head in all the States. Western Australia throughout the period has occupied the premier position, and in 1924–25 the revenue per head in that State exceeded the average for Australia by about 37 per cent. In Tasmania, however, the revenue per head has averaged about 68 per cent. only of the average for Australia.

PUBLIC DEBT—COMMONWEALTH AND STATES, 1901 TO 1925.



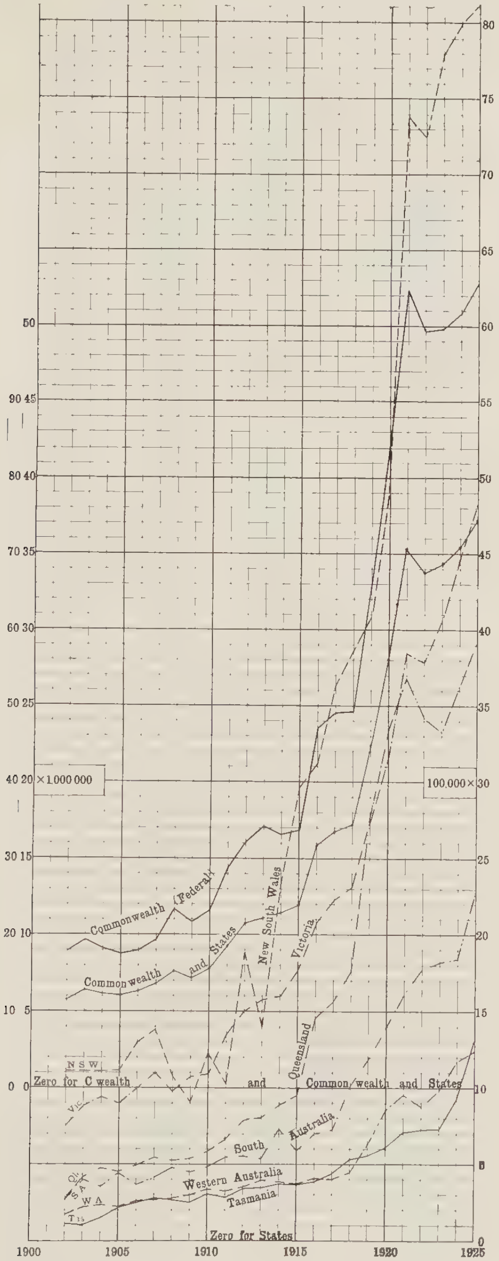
EXPLANATION.—The base of each small square represents an interval of one year, while the vertical height represents £10,000,000 in the case of the Commonwealth (Federal) and States Debts, the scale for which is on the left hand side, and £20,000,000 for Commonweath and States combined, the scale for which is on the right hand. The Commonwealth (Federal) debt commenced in the year 1911.

CONSOLIDATED REVENUE—COMMONWEALTH AND STATES, 1902 TO 1925.



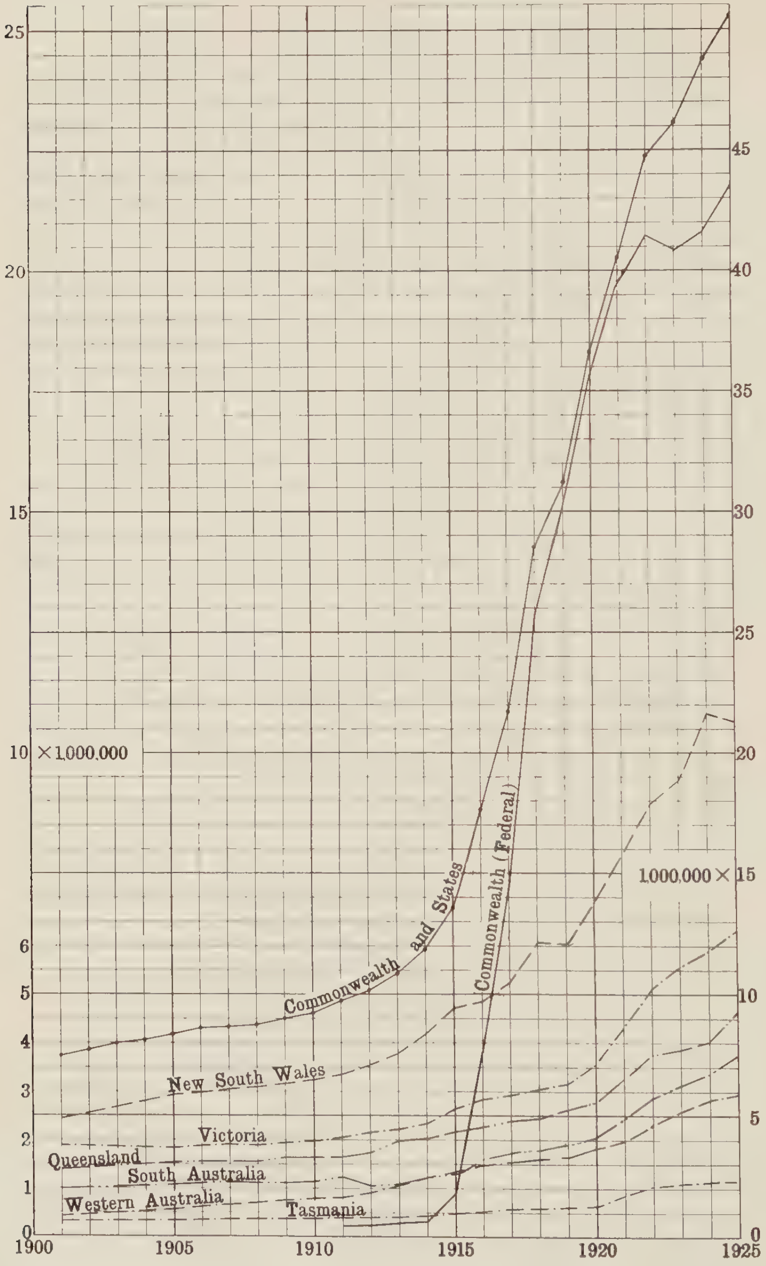
Explanation.—The base of each small square represents an interval of one year, while the vertical height represents £5,000,000. The zero lines in each case are marked thus "0."

TAXATION.—COMMONWEALTH AND STATES, 1902 TO 1925.



EXPLANATION.—The base of each small square represents an interval of one year. Of the two scales on the left hand, the outer one is that for the Commonwealth and States combined, the vertical height of each square representing £2,000,000, and the inner one that for the Commonwealth (Federal), the vertical height representing £1,000,000. The scale on the right hand is that for the States, and the vertical height of each small square represents £100,000.

INTEREST ON PUBLIC DEBTS.—COMMONWEALTH AND STATES, 1901 TO 1925.



Explanation.—The base of each small square represents an interval of one year, while the vertical height represents £500,000 in the case of the Commonwealth (Federal) and States, the scale for which is on the left hand side, and £1,000,000 in the case of the Commonwealth and States combined, for which the scale is on the right hand side.

3. Sources of Revenue.—(i) *General.* Classifying the revenue of the several States in the manner indicated in 1 *ante*, particulars for the year 1924–25 are as follows :—

STATE CONSOLIDATED REVENUE.—SOURCES, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL REVENUE.							
	£	£	£	£	£	£	£
Taxation	8,115,151	4,819,580	3,914,161	2,290,754	1,224,030	1,306,361	21,670,037
Public works and services ..	24,754,631	14,230,914	7,317,803	5,618,853	4,577,204	909,853	57,409,258
Land	2,046,168	412,284	1,468,741	279,836	502,224	76,427	4,785,680
Commonwealth subsidy	2,796,928	2,055,834	1,034,933	668,084	(*a*)561,743	(*b*)355,257	7,472,779
Miscellaneous ..	1,109,710	2,786,275	1,161,618	875,511	1,516,245	114,115	7,563,474
Total ..	38,822,588	24,304,887	14,897,256	9,733,038	8,381,446	2,762,013	98,901,228
PER HEAD OF POPULATION.							
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Taxation	3 12 0	2 18 2	4 13 9	4 5 1	3 7 3	5 19 11	3 13 9
Public works and services ..	10 19 7	8 11 9	8 15 3	10 8 8	12 11 5	4 3 6	9 15 6
Land	0 18 2	0 5 0	1 15 2	0 10 5	1 7 7	0 5 1	0 16 4
Commonwealth subsidy	1 4 10	1 4 10	1 4 10	1 4 10	1 10 10	1 12 8	1 5 5
Miscellaneous ..	0 9 10	1 13 7	1 7 10	1 12 6	4 3 3	0 12 5	1 5 9
Total ..	17 4 5	14 13 4	17 16 10	18 1 6	23 0 4	12 13 7	16 16 9

(*a*) Including special grant of £110,000. (*b*) Including special grant of £85,000.

In connexion with the item Public Works and Services, it should be borne in mind that services performed by the Government in one State may, in another, be carried out by a Board or Trust. For instance, in New South Wales and Western Australia the tramway systems are controlled by the Government, while in the other States ownership is largely vested in Trusts or private companies. Harbour and river services and water supply and sewerage are also controlled in some cases by the State and in others by Trusts

The magnitude of the revenue per head from public works and services in the case of Western Australia is mainly due to the fact that the number of miles of railway in that State is large compared with the population, while the revenue-earning power of the railways is also high. In New South Wales and Western Australia the revenue from tramways is also included.

(ii) *Relative Importance of Various Sources.* The following table indicates the relative importance of the different sources of revenue in the several States, by showing the percentage which each item of revenue bears on the total for the State for the year 1924–25 :—

STATE CONSOLIDATED REVENUE.—PERCENTAGE OF ITEMS, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	%	%	%	%	%	%	%
Taxation	20.90	19.83	26.27	23.54	14.60	47.30	21.91
Public works and services ..	63.76	58.55	49.12	57.73	54.61	32.94	58.05
Land	5.27	1.70	9.86	2.88	6.00	2.77	4.84
Commonwealth subsidy ..	7.21	8.46	6.95	6.86	6.70	12.86	7.56
Miscellaneous	2.86	11·46	7.80	8.99	18.09	4.13	7.64
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(iii) *Revenue from Taxation.*—(*a*) *General.* Prior to Federation, duties of Customs and Excise constituted the principal source of revenue from taxation. At present, the most productive State tax is the income tax, imposed in all the States, and representing for 1924–25 nearly 60 per cent. of the total taxation revenue. For 1924–25, stamp duties occupied second place. In addition to these, a State land tax and licence fees of various kinds are collected in all the States, while a dividend tax is levied in Western Australia. The total revenue from taxation collected by the States during the year 1924–25 was £21,670,037, details of which are set forth in the table hereunder :—

STATE CONSOLIDATED REVENUE FROM TAXATION, 1924–25.

Taxation.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Probate and succession duties	1,248,336	802,333	334,801	225,999	68,114	88,404	2,767,987
Other stamp duties ..	1,478,392	963,307	416,539	442,823	204,108	182,996	3,688,165
Land Tax	2,569	421,662	452,481	185,681	113,867	124,114	1,300,374
Income Tax	4,661,892	2,076,656	2,509,913	1,268,898	*a* 716,109	781,194	12,014,662
Licences	223,236	382,884	100,232	31,747	68,927	35,846	842,872
Other Taxation	500,726	172,738	100,195	135,606	52,905	93,807	1,055,977
Total	8,115,151	4,819,580	3,914,161	2,290,754	1,224,030	1,306,361	21,670,037

(*a*) Includes £237,467 Dividend Tax.

The total amount and the amount per head raised from taxation by the several State Governments during the five years 1920–21 to 1924–25 are given in the following table :—

STATE CONSOLIDATED REVENUE FROM TAXATION, 1920–21 TO 1924–25.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
			TOTAL.				
	£	£	£	£	£	£	£
1920–21	7,388,133	3,846,833	3,682,642	1,622,076	955,359	708,603	18,203,646
1921–22	7,249,017	3,791,174	3,420,296	1,778,576	881,159	727,701	17,847,923
1922–23	7,799,118	4,077,046	3,330,885	1,816,776	987,558	728,175	18,739,558
1923–24	7,988,131	4,476,158	3,617,201	1,841,720	1,173,568	928,360	20,025,138
1924–25	8,115,151	4,819,580	3,914,161	2,290,754	1,224,030	1,306,361	21,670,037
			PER HEAD OF POPULATION.				
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
1920–21	3 10 8	2 10 4	4 18 1	3 6 1	2 17 8	3 6 7	3 7 3
1921–22	3 8 2	2 8 11	4 9 0	3 10 10	2 12 6	3 6 8	3 4 9
1922–23	3 11 9	2 11 3	4 4 6	3 10 10	2 17 6	3 6 6	3 6 6
1923–24	3 12 3	2 15 1	4 9 2	3 10 2	3 6 4	4 4 9	3 9 8
1924–25	3 12 0	2 18 2	4 13 9	4 5 1	3 7 3	5 19 11	3 13 9

During the period between 30th June, 1921, and 30th June, 1925, State revenue from taxation increased by about 20 per cent., the increase varying considerably in the different States. The great increase of recent years in Tasmania is due principally to the broadening of the basis of the State Income Tax. While State taxation for the year 1921–22 showed a slight decline from the previous year, owing mainly to diminished collections in New South Wales and Queensland, increases occurred in 1924–25 in every State.

Taking the States as a whole, taxation increased by 6s. 6d. per head during the period from 1920–21 to 1924–25, the most marked increase occurring in the case of Tasmania.

In Queensland the taxation per head in 1924–25, although still higher than in any State except Tasmania, was lower by 4s. 4d. than the Queensland figure for 1920–21.

(*b*) *Probate and Succession Duties.* Probate duties have been levied for many years in all the States, but the provisions of the Acts governing the payment of duty differ widely both in regard to the ordinary rates and those which apply to special beneficiaries. A table showing the values of the estates in which probates and letters of administration were granted is given later. (See Private Finance § 8 hereinafter.)

The duties collected for the financial years 1920–21 to 1924–25 are as follows :—

STATE PROBATE AND SUCCESSION DUTIES.—COLLECTIONS, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
New South Wales ..	734,352	907,307	1,176,596	965,200	1,248,336
Victoria..	702,468	706,181	697,482	798,315	802,333
Queensland	328,204	295,748	257,402	280,472	334,801
South Australia	158,107	197,764	205,382	191,373	225,999
Western Australia ..	42,407	76,817	45,997	66,969	68,114
Tasmania	53,407	61,142	56,530	71,750	88,404
Total	2,018,945	2,244,959	2,439,389	2,374,079	2,767,987

(*c*) *Other Stamp Duties.* The revenue derived from stamp duties (exclusive of probate and succession duties) for the years 1920–21 to 1924–25 is shown in the accompanying table :—

STATE STAMP DUTIES.—COLLECTIONS, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
New South Wales ..	1,414,468	1,343,389	1,460,436	1,538,924	1,478,392
Victoria..	930,221	932,649	1,117,839	1,179,364	963,307
Queensland	332,559	308.991	353,745	405,056	416,539
South Australia	370,288	346,918	397,050	430,045	442,823
Western Australia ..	177,404	164,929	173,453	194,176	204,108
Tasmania	148,893	144,125	166,424	180,773	182,996
Total	3,373,833	3,241,001	3,668,947	3,928,338	3,688,165

(*d*) *Land Tax.* All the States impose a Land Tax, although Queensland, the last State to fall into line, collected its first levy in 1915–16. In the other States the impost is of long standing. In New South Wales the State Land Tax is levied on the unincorporated portion of the western division of the State only.

The following table shows the amount collected by means of such taxes during the financial years 1920–21 to 1924–25 :—

STATE LAND TAX.—COLLECTIONS, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
New South Wales ..	2,717	2,490	2,570	2,657	2,569
Victoria..	331,756	372,060	392,594	412,165	421,662
Queensland	469,175	480,518	417,865	445,873	452,481
South Australia	168,020	162,104	197,107	184,226	185,681
Western Australia ..	57,791	42,549	79,983	71,449	113,867
Tasmania	89,085	97,031	97,352	120,657	124,114
Total	1,118,544	1,156,752	1,187,471	1,237,027	1,300,374

(*e*) *Income Tax.* A tax on the incomes of persons, whether derived from personal exertion or from property, is also imposed in all the States. As might be expected, the rates, exemptions, etc., are widely divergent, but the general principles of the several Acts are similar. The Dividend Duties Act of Western Australia supplied to a certain extent the place of an income tax in that State in former years, but, with the increasing demands upon the Treasury, the levying of a direct income tax was found necessary.

The following table shows the total amount collected in the several States during the years 1920–21 to 1924–25. In the case of Western Australia the amount of dividend duty collected is included.

STATE INCOME AND DIVIDEND TAXES.—COLLECTIONS, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
New South Wales ..	4,399,360	4,077,897	4,196,228	4,373.519	4,661,892
Victoria..	1,591,198	1,443,209	1,514,256	1,702,483	2,076,656
Queensland	2,410,171	2,194,361	2,149,607	2,300,044	2,509,913
South Australia	852,001	975,043	903,460	894,283	1,268,898
Western Australia ..	579,289	497,879	579,060	719,160	716,109
Tasmania	348,005	355,035	325,151	431,271	781,194
Total	10,180,024	9,543,424	9,667,762	10,420,760	12,014,662

(*f*) *Commonwealth and State Taxation.* The table hereunder shows the combined Commonwealth and State taxation for each of the years 1920–21 to 1924–25, as well as the amount per head of population :—

TOTAL COMMONWEALTH AND STATE TAXATION, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Commonwealth taxation ..	52,427,421	49,678,842	49,885,017	50,852,483	52,835,690
State taxation	18,203,646	17,847,923	18,739,558	20,025,138	21,670.037
Total	70,631,067	67,526,765	68,624,575	70,877,621	74,505,727
Taxation per head ..	£13/1/0	£12/5/1	£12/3/7	£12/6/7	£12/13/8

Whilst the Commonwealth taxation increased during the period by £408,269, all of which was due to Customs and Excise, the State taxation advanced by £3,466,391, the aggregate increase being £3,874 660. The amount *per capita* of total taxation has decreased about 3 per cent. in the period under review.

(iv) *Public Works and Services.* A very large proportion of State revenues is made up of receipts from public works and services under the control of the Governments. The principal of these are railways and tramways, harbour works, and water supply and sewerage, while, in addition, State batteries for the treatment of auriferous ores exist in Western Australia, and various minor revenue-producing services are rendered by the Governments of all States. For the year 1924–25 the aggregate revenue from these sources was £57,409,258, or 58 per cent. of the revenue from all sources. Details of revenue from public works and services for the year 1924–25 are as follows :—

STATE REVENUE FROM PUBLIC WORKS AND SERVICES, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States
	£	£	£	£	£	£	£
Railways and tramways ..	20,624,793	*a*12,549,878	*a*7,052,310	*a*4,016 485	3,616,426	*a* 547,682	48,407,574
Harbour services ..	1,301,744	213,510	82,554	622,700	262,124	..	2,482,632
Public batteries ..	..	..	..	..	17,816	..	17,816
Water supply and sewerage	2,002,418	*b*439,444	..	558,461	441,962	..	3,442,285
Other public services	825,676	1,028,082	182,939	421,207	238,876	362,171	3,058,951
Total	24,754,631	14,230,914	7,317,803	5,618,853	4,577,204	909,853	57,409,258

(*a*) Railways only. (*b*) Water supply only.

(v) *Lands.* The revenue from the sale and rental of Crown lands has, with few exceptions, been treated from the earliest times as forming part of the Consolidated Revenue Funds, and has been applied to meet ordinary expenses. Where the rentals received are for lands held for pastoral or residential purposes such application of the revenue would appear justifiable. On the other hand, where the rentals are for mineral and timber lands, and in all cases of sales of lands, the proceeding is essentially a disposal of capital to defray current expenses, and is, therefore, open to criticism. The following table gives the revenue from sales and rentals of Crown lands for the year 1924–25 :—

STATE LAND REVENUE, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Sales ..	90,714	83,026	33	31,221	334,109	26,845	565.948
Rentals ..	1,955,454	329,258	1,468,708	248,615	168,115	49,582	4,219,732
Total ..	2,046,168	412,284	1,468,741	279,836	502,224	76,427	4,785,680

(vi) *Commonwealth Subsidy.* The payments to the States of Commonwealth subsidy represent in each instance a considerable proportion of the States' revenue, and for the year 1924–25 aggregated £7,472,779. A reference to the proposals to discontinue the payment of this subsidy will be found in Section B, §1. 3. of this chapter. The percentage represented by the subsidy received by each State for 1924–25 on the total revenue of that State is shown in the following table :—

COMMONWEALTH SUBSIDY PAID TO EACH STATE, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Commonwealth subsidy	2,796,928	2,055,834	1,034,933	668,084	*a* 561,743	*b* 355,257	7,472,779
Total revenue ..	38,822,588	24,304,887	14,897,256	9,733,038	8,381,446	2,762,013	98,901,228
	%	%	%	%	%	%	%
Percentage of subsidy on revenue ..	7.20	8.45	6.95	6.86	6.70	12.14	7.56

(*a*) Including special grant of £110,000. (*b*) Including special grant of £85,000.

(vii) *Miscellaneous.* In addition to the foregoing, there are in each State several miscellaneous sources of revenue, including such items as interest, fines, fees, etc., which for the year 1924–25 aggregated £7,563,474. Of this amount, interest was responsible for £4,023,962.

Division II.—Expenditure.

1. **General.**—The principal heads of State expenditure from Consolidated Revenue Funds are :—

(*a*) Interest and sinking funds in connexion with public debt.
(*b*) Working expenses of railways and tramways.
(*c*) Justice.
(*d*) Police.
(*e*) Penal establishments.
(*f*) Education.
(*g*) Medical and charitable expenditure.
(*h*) All other expenditure.

Of these, that of working expenses of railways and tramways was the most important, and for the year 1924–25 represented about 36 per cent. of the aggregate expenditure from the Consolidated Revenue Fund. Next in importance for that year was the item of interest and sinking fund in connexion with the public debt, then education, medical and charitable expenditure, and police, in the order named.

2. **Total Expenditure**—The total expenditure from Consolidated Revenue Funds in the several States, and the expenditure per head of population during each of the years 1920–21 to 1924–25 are given in the table hereunder :—

STATE EXPENDITURE.—CONSOLIDATED REVENUE FUNDS, 1920–21 TO 1924–25.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
			TOTAL.				
	£	£	£	£	£	£	£
1920–21	34,476,892	18,941,698	12,591,201	7,543,640	7,476,291	2,189,157	83,218,879
1921–22	36,966,525	20,297,279	12,499,970	7,826,241	7,639,242	2,302,077	87,531,334
1922–23	35,342,436	21,611,309	12,784,382	8,426,517	7,612,856	2,472,523	88,250,023
1923-24	37,251,419	23,050,968	13,415,332	8,985,599	8,094,753	2,658,382	93,456,453
1924–25	39,579,058	24,170,483	14,880,288	9,680,037	8,439,844	2,675,618	99,425,328
			PER HEAD OF POPULATION.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1920–21	16 9 8	12 7 11	16 15 6	15 7 3	22 11 4	10 5 10	15 7 6
1921–22	17 7 5	13 1 9	16 5 5	15 11 6	22 15 1	10 10 11	15 7 8
1922–23	16 5 4	13 11 10	16 4 3	16 8 4	22 3 2	11 5 11	15 13 4
1923–24	16 16 10	14 3 8	16 10 9	17 2 6	22 17 7	12 2 9	16 5 1
1924–25	17 11 1	14 11 9	17 16 5	17 19 6	23 3 7	12 5 8	16 18 6

Details of the expenditure are given in the next table.

3. Details of Expenditure for 1924–25.—(i) *General.* The following table shows the total expenditure and expenditure per head under each of the principal items :—

STATE EXPENDITURE.—DETAILS, 1924–25.

TOTAL.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Public debt (interest, sinking fund, etc.)	9,316,858	6,469,234	4,246,533	3,180,253	3,103,303	1,091,601	27,407,782
Railways and tramways (working expenses)	15,109,059	*a*9,525,842	*b*5,423,279	*b*2,906,403	2,591,123	*b*535,836	36,091,542
Justice	573,010	259,216	158,422	67,028	80,715	19,637	1,158,028
Police	1,134,173	776,285	497,484	246,262	187,240	81,249	2,922,693
Penal establishments	145,403	99,732	38,239	39,761	23,366	9,426	355,927
Education	3,829,159	2,238,346	1,410,085	717,036	613,165	285,067	9,092,858
Medical and charitable	1,871,371	1,136,190	795,418	435,855	440,004	175,276	4,854,114
All other expenditure	7,600,025	3,665,638	2,310,828	2,087,439	1,400,928	477,526	17,542,384
Total ..	39,579,058	24,170,483	14,880,288	9,680,037	8,439,844	2,675,618	99,425,328

PER HEAD OF POPULATION.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Public debt (interest, sinking fund, etc.) ..	4 2 8	3 18 1	5 1 9	5 18 1	8 10 5	5 0 3	4 13 4
Railways and tramways (working expenses)	6 14 0	*a*5 15 0	*b*6 9 11	*b*5 7 11	7 2 4	*b*2 9 3	6 2 11
Justice	0 5 1	0 3 2	0 3 9	0 2 6	0 4 5	0 1 10	0 3 11
Police	0 10 0	0 9 4	0 11 11	0 9 2	0 10 4	0 7 5	0 10 0
Penal establishments	0 1 4	0 1 2	0 0 11	0 1 6	0 1 4	0 0 10	0 1 3
Education	1 14 0	1 7 0	1 13 9	1 6 8	1 13 8	1 6 2	1 10 11
Medical and charitable	0 16 7	0 13 9	0 19 1	0 16 2	1 4 2	0 16 1	0 16 6
All other expenditure	3 7 5	2 4 3	2 15 4	3 17 6	3 16 11	2 3 10	2 19 9
Total ..	17 11 1	14 11 9	17 16 5	17 19 6	23 3 7	12 5 8	16 18 7

(*a*) Including 7.59 miles of electric tramways operated by the Victorian Railways. (*b*) Railways only.

(ii) *Relative Importance of Various Items.* The relative importance of the items varies considerably, and the following table shows for each State the percentage under each item on the total expenditure :—

STATE EXPENDITURE.—PERCENTAGES OF ITEMS, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	%	%	%	%	%	%	%
Public debt (interest, sinking fund, etc.)	23.54	26.77	28.54	32.85	36.77	40.80	27.57
Railways and tramways (working expenses)	38.17	*a*39.41	*b*36.45	*b*30.03	30.70	*b*20.03	36.30
Justice	1.45	1.07	1.06	0.69	0.96	0.73	1.16
Police	2.87	3.21	3.34	2.54	2.22	3.04	2.94
Penal establishments	0.36	0.41	0.26	0.41	0.28	0.35	0.36
Education	9.68	9.26	9.48	7.41	7.26	10.65	9.15
Medical and charitable	4.73	4.70	5.34	4.50	5.21	6.55	4.88
All other expenditure	19.20	15.17	15.53	21.57	16.60	17.85	17.64
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(*a*) Including 7.59 miles of electric tramways operated by the Victorian Railways. (*b*) Railways only.

The interest and sinking fund on the public debt, together with the working expenses of the railways and tramways, represented for the year 1924–25 about 64 per cent. of the aggregate State expenditure, a proportion which has been maintained with great regularity for many years past.

Division III.—Balances.

1. **Position on 30th June, 1925.**—On various occasions in each of the States the revenue collected for a financial year has failed to provide the funds requisite for defraying the expenditure incurred during that year, the consequent deficit being usually liquidated either by cash obtained from trust funds, or by the issue of Treasury bills. During the period of financial stress resultant upon the crisis of 1893 and the drought conditions of succeeding years, the accumulated overdrafts of several of the States grew very rapidly, and the position now is that no State has a credit balance. The situation on 30th June, 1925, was as follows :—

STATE CONSOLIDATED REVENUE FUND BALANCES, 30th JUNE, 1925.

State.	Debit Balance.		Net Debit Balance.
	Cash Overdraft.	Overdraft liquidated by Treasury Bills.	
	£	£	£
New South Wales	3,430,815	..	3,430,815
Victoria	18,796	778,286	797,082
Queensland	430,335	..	430,335
South Australia	555,887	..	555,887
Western Australia	461,908	5,736,577	6,198,485
Tasmania	422,771	349,401	772,172
Total	5,320,512	6,864,264	12,184,776

§ 3. State Trust Funds.

1. **Nature.**—In addition to the moneys received as revenue and paid to the credit of their respective Consolidated Revenue Funds, considerable sums are held by the State Governments in trust for various purposes. In most of the States also, sinking funds for the redemption of public debt are provided, and the moneys accruing thereto are paid to the credit of the appropriate trust funds. A similar course is followed in the case of municipal sinking funds placed in the hands of the Governments. In all the States except New South Wales, life assurance companies operating are required to deposit a substantial sum in cash or approved securities with the Government, and these deposits help to swell the trust funds. Various other deposit accounts, superannuation funds, suspense accounts, etc., also find a place. The trust funds have at various times enabled the several State Treasurers to tide over awkward financial positions, but the propriety of allowing deficits to be liquidated in this manner is open to question.

2. **Extent.**—The amount of trust funds held on the 30th June, 1925, was as follows :—

STATE TRUST FUNDS, 30th JUNE, 1925.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
Amount of trust funds	26,001,112	9,023,882	*Dr.* 632,230	1,201,205	19,188,751	1,826,877	56,609,597

§ 4. State Loan Funds.

Division I.—Loan Expenditure.

1. **General.**—So far back as the year 1842, revenue collections were supplemented with borrowed moneys, the earliest loan being by New South Wales for the purpose of assisting immigration, at rates of interest varying from 2¾d. to 5¼d. per £100 per diem, or approximately from 4½ per cent. to 8 per cent. per annum. Australian public borrowing, however, is mainly due to the fact that the State Governments, in addition to ordinary administrative duties, undertake functions which in other countries are usually entrusted to local authorities or left to private enterprise. Foremost amongst these are the construction and control of the railway systems, but loan moneys have largely been used for improvements to harbours and rivers, and the construction of water supply and sewerage works. The State loan expenditure and public debt thus differ very materially from those of most European countries, and from those of the Commonwealth, where such expenditure was very largely incurred for purposes of defence, or in the prosecution of war. As shown above, the State debts consist chiefly of moneys raised and expended with the object of assisting the development of the resources of the country, and are, to a very large extent, represented by tangible assets.

2. **Loan Expenditure, 1924–25.**—For the year ended 30th June, 1925, State expenditure from loan funds was £30,850,913, New South Wales with a total of £9,175,686 being the principal contributor to this amount. Expenditure on railways and tramways is a very heavy item, but in recent years the settlement of returned soldiers upon the land has absorbed large sums. Details for the year for each State are given in the following table :—

STATE LOAN EXPENDITURE, 1924–25.

Heads of Expenditure.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Railways and tramways	4,674,092	1,483,720	1,741,805	2,151,329	560,674	28,638	10,640,258
Water supply, sewerage and water conservation	2,539,275	1,471,567	131,595	917,742	650,295	..	5,710,474
Harbours, rivers, etc. Roads and Bridges	1,168,927	1,155,362	..	684,613	273,618	175,010	3,457,530
Public Buildings ..	606,391	476,930	262,005	217,035	91,140	25,355	1,678,856
Development of mines, etc.	..	..	..	..	85,731	..	85,731
Advances to settlers ..	56,473	2,014,468	..	(a)437,403	2,172,683	23,814	3,838,612
Land purchases for settlement	..		108,657	(a) 54,565		(a)45,515	
Loans to local bodies ..	(a) 511	12,881	931,294	..	..	17,453	961,117
Rabbit-proof fences ..	53,643	32,399	27,206	(a) 2,528	..	..	110,720
Other Public works and purposes	77,396	(b) 2,152,204	879,179	44,082	264,880	17,730	3,435,471
Total	9,175,686	8,799,531	4,081,741	3,520,305	4,099,021	242,485	29,918,769

(a) Repayment. (b) Including £1,996,064 for Electricity supply.

3. **Loan Expenditure, 1920–21 to 1924–25.**—The following table gives the loan expenditure during each of the years 1920–21 to 1924–25 :—

STATE LOAN EXPENDITURE, 1920–21 TO 1924–25.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
				TOTAL.			
	£	£	£	£	£	£	£
1920–21	14,701,028	11,095,158	4,251,248	1,826,841	2,586,404	2,717,452	37,178,131
1921–22	10,142,732	11,804,991	2,599,573	2,689,422	2,451,924	2,097,364	32,089,006
1922–23	9,794,019	8,764,306	3,701,750	3,480,281	3,389,299	1,153,645	39,283,300
1924–24	7,735,480	8,407,526	4,650,199	3 971,938	3,936,833	712,214	29,414,190
1924–25	9,175,686	8,799,531	4,081,741	3,520,305	4,099,021	242,485	29,918,769
				PER HEAD OF POPULATION.			
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1920–21	7 0 7	7 5 3	5 13 2	3 14 5	7 16 1	12 15 6	6 17 4
1921–22	4 18 2	7 12 3	3 7 8	5 7 1	7 6 3	9 12 2	5 16 6
1922–23	4 10 2	5 10 3	4 13 11	6 15 8	9 17 4	5 5 5	5 7 6
1923–24	3 9 11	5 3 6	5 14 8	7 11 5	11 2 6	3 5 0	5 2 4
1924–25	4 1 5	5 6 2	4 17 9	6 10 9	11 5 2	1 2 3	5 1 10

The loan expenditure per head of population varies in the different States and in different years, reaching its highest point for the five years under review in Tasmania in 1920–21 with £12 15s. 6d. per head, and its lowest in the same State in 1924–25 with £1 2s. 3d. per head.

4. **Total Loan Expenditure to 30th June, 1925.**—(i) *General.* The total loan expenditure of the States from the initiation of borrowing to the 30th June, 1925, amounted to £596,464,299. The purposes for which this sum was expended are shown in the following table :—

TOTAL STATE LOAN EXPENDITURE TO 30th JUNE, 1925.

Heads of Expenditure.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Railways and tramways	114,846,826	66,250,088	52,048,907	25,575,984	20,449,444	6,875,327	286,046,576
Telegraphs and telephones	1,761,845	..	996,587	991,772	..	142,410	3,892,614
Water supply, sewerage and water conservation	41,785,515	19,131,601	1,692,006	16,569,089	6,696,948	..	85,875,159
Harbours, rivers, etc. Roads and bridges	22,771,414	7,919,936	3,949,576	9,098,097	5,093,478	5,696,461	54,528,962
Defence	1,457,536	149,323	363,085	291,615	..	128,224	2,389,783
Public Buildings ..	7,738,009	3,970,836	3,080,886	2,138,965	1,097,054	1,506,949	19,532,699
Immigration	721,387	20,000	2,763,071	..	455,405	235,000	4,194,863
Development of mines, etc.	..	520,421	..	5,111	2,099,403	..	2,624,935
Land purchases for settlement	6,047,000	30,545,429	2,931,144	14,442,231	14,511,916	3,011,235	74,440,419
Advances to settlers ..	833,077		..	1,813,008		305,379	
Loans to local bodies ..	84,096	1,826,764	8,151,368	..	..	1,531,370	11,593,598
Rabbit-proof fences ..	284,060	432,859	361,861	199,002	328,703	..	1,606,485
Other public works and purposes	10,094,125	13,013,060	12,015,419	3,955,959	6,162,681	4,496,962	49,738,206
Total	208,424,890	143,780,317	88,353,910	75,080,833	56,895,032	23,929,317	596,464,299

The figures in the table show the amounts actually spent, and differ from those given later in the statements relating to the public debt, which represent the amount of loans still unpaid. The statement above includes all expenditure, whether the loans have been repaid or are still in existence. In the public debt statement, however, loans repaid are not included, and in the case of loans still outstanding, each is shown according to the amount repayable at maturity, and not according to the amount originally available for expenditure.

(ii) *Relative Importance of Items.* The relative importance of the various items of loan expenditure is indicated in the following table, which gives the percentage of each loan on the total loan expenditure in each State and for the States as a whole to 30th June, 1925 :—

TOTAL STATE LOAN EXPENDITURE TO 30th JUNE, 1925.—PERCENTAGES OF ITEMS.

Heads of Expenditure.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	%	%	%	%	%	%	%
Railways and tramways	55.10	46.08	58.91	34.06	35.94	28.73	47.96
Telegraphs and telephones	0.85	..	1.13	1.32	..	0.60	0.65
Water supply, sewerage and water conservation	20.05	13.31	1.91	22.07	11.77	..	14.40
Harbours, rivers, etc. } Roads and bridges }	10.92	5.51	4.47	12.12	8.0	23.81	9.14
Defence	0.70	0.10	0.41	0.39	..	0.53	0.40
Public buildings ..	3.71	2.76	3.49	2.85	1.93	6.30	3.28
Immigration	0.35	0.01	3.12	..	0.80	0.98	0.70
Development of mines, etc.	..	0.36	..	0.01	3.69	..	0.44
Land purchases for settlement	2.90	21.25	3.32	19.24	25.51	12.58	12.48
Advances to settlers ..	0.40		..	2.41		1.28	
Loans to local bodies ..	0.04	1.27	9.23	..	..	6.40	1.94
Rabbit-proof fences ..	0.14	0.30	0.41	0.27	0.58	..	0.27
Other public works and purposes	4.84	9.05	13.60	5.26	10.83	18.79	8.34
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Division II.—State Public Debts.

1. **General.**—The first government loan raised in Australia was obtained by New South Wales in 1842. This and nine other loans prior to 1855 were all procured locally. In the last-mentioned year, Australia approached the London market, the occasion being the placing of the first instalment of the New South Wales 5 per cent. loan for £683,300. Victoria first appeared as a borrower in 1854, and made its first appearance on the London market in 1859. In the other States the first public loans were raised in the following years:—Queensland 1861, South Australia 1854, Western Australia 1845, and Tasmania 1867.

2. **State Debts, 1921 to 1925.**—The table hereunder shows the State public debts and the amounts owing per head of population at the 30th June in each year from 1921 to 1925 inclusive. The totals include sums advanced by the Commonwealth to the States for settling returned soldiers on the land, and for this reason they differ in some cases from those given in previous issues. On the transfer of the Queensland State Savings Bank business to the Commonwealth Bank in 1920, Queensland Government securities were handed to the latter for the Savings Bank current account credit balance and for amounts owing on account of Advances to Settlers and Workers' Dwellings. This transaction added a total of £5,936,916 to the Public Debt without involving any additional borrowing. Repayments reduced this amount at 30th June, 1925, to £4,367,261.

STATE PUBLIC DEBTS, 30th JUNE, 1921 TO 1925.

Date.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
			TOTAL.				
	£	£	£	£	£	£	£
30th June, 1921..	175,084,937	97,317,830	79,744,321	54,888,685	49,039,668	18,772,018	474,847,459
,, 1922..	190,857,535	109,099,199	85,691,228	60,936,238	54,959,778	21,945,411	523,489,389
,, 1923..	197,936,092	118,562,029	88,005,001	65,451,873	58,485,555	22,438,091	550,878,641
,, 1924..	224,179,515	124,108,326	90,561,350	70,016,829	62,765,782	23,732,685	595,364,487
,, 1925..	215,331,110	131,169,565	96,389,067	74,780,835	64,493,261	23,894,416	606,058,254
			PER HEAD OF POPULATION.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
30th June, 1921..	83 5 11	63 7 5	103 18 8	110 7 3	146 19 8	88 11 11	87 0 10
,, 1922..	88 17 1	69 9 6	109 7 2	120 14 0	161 12 4	102 17 8	94 0 4
,, 1923..	90 5 6	73 15 0	109 4 9	125 15 9	168 0 1	104 19 2	96 16 11
,, 1924..	100 10 3	75 13 9	109 8 9	132 7 10	174 3 7	111 6 4	102 11 9
,, 1925..	94 15 7	78 10 1	112 14 2	137 13 9	175 4 10	112 15 2	102 4 3

The greatest increase in indebtedness was experienced in New South Wales, which added £40,246,173 during the period under review. The public debt of the whole of the States increased during the same period by £131,210,795, or at the rate of nearly £33,000,000 per annum.

3. Place of Flotation of Loans.—(i) *For each State.* As pointed out previously, the yearly loans, usually for comparatively small amounts, were raised locally, but, with the increasing demand for loan funds and the more favourable terms offering in the London market, the practice of raising loans in London came into vogue, and for many years local flotations, except for short terms or small amounts, were comparatively infrequent. In more recent years, however, the accumulating stocks of money in Australia seeking investment have led to the placing of various redemption and other loans locally, with very satisfactory results. Moreover, certain loans have been placed in New York on account of the Queensland and Tasmanian Governments. The following table gives particulars of loans outstanding on the 30th June, 1925, which had been floated abroad and in Australia respectively :—

STATE PUBLIC DEBTS.—PLACE OF FLOTATION OF LOANS, 30th JUNE, 1925.

State.	Floated Abroad.		Floated in Australia.		Total Public Debt.
	Amount.	Percentage on Total Debt.	Amount.	Percentage on Total Debt.	
	£	%	£	%	£
New South Wales ..	136,064,504	63.19	79,266,606	36.81	215,331,110
Victoria	51,869,204	39.54	79,300,361	60.46	131,169,565
Queensland	(*a*) 62,953,083	65.31	33,435,984	34.69	96,389,067
South Australia ..	33,016,046	44.15	41,764,789	55.85	74,780,835
Western Australia ..	42,926,480	66.56	21,566,781	33.44	64,493,261
Tasmania	12,761,250	53.41	11,133,166	46.59	23,894,416
Total ..	339,590,567	56.03	266,467,687	43.97	606,058,254

(*a*) Including £4,521,167, floated in New York.

(ii) *Total, All States.* The next table showing similar particulars of aggregate State indebtedness at the end of the years 1920–21 to 1924–25, indicates the rapidity with which the local holdings have increased.

STATE PUBLIC DEBTS.—PLACE OF FLOTATION OF LOANS, 30th JUNE, 1921 TO 1925.

Year.	Floated Abroad.		Floated in Australia.		Total Public Debt.
	Amount.	Percentage on Total Debt.	Amount.	Percentage on Total Debt.	
	£	%	£	%	£
30th June, 1921 ..	271,981,090	57.28	202,866,369	42.72	474,847,459
„ 1922 ..	300,274,441	57.36	223,214,948	42.64	523,489,389
„ 1923 ..	309,216,201	56.13	241,662,440	43.87	550,878,641
„ 1924 ..	342,660,422	57.55	252,704,065	42.45	595,364,487
„ 1925 ..	339,590,567	56.03	266,467,687	43.97	606,058,254

In the course of four years the oversea indebtedness of the States has increased by £67,609,477, while the local indebtedness has increased by £63,601,318. In other words, the Australian proportion had on 30th June, 1925, grown to more than three-sevenths.

The total indebtedness of the States increased during the year 1924–25 by £10,693,767, and is accounted for chiefly by the loans from the Commonwealth Government, which has either advanced money to the States, or acted as agent in obtaining loans from London. The sums raised have been largely spent in settling returned soldiers on the land, in constructing silos for wheat storage, and in providing employment through the medium of local bodies.

4. Rates of Interest.—(i) *At 30th June, 1925.* As mentioned previously, the highest rate of interest paid for the earliest State loans was fivepence farthing per £100 per diem, or, approximately, 8 per cent. per annum. At present the rates vary from 7¼ per cent. to 3 per cent., no fewer than twenty-seven separate rates being involved. It is probable however, that the debt at the higher rates will largely increase in the future, since conversion can scarcely be effected at present at a lower rate of interest than 5 per cent. The average rate payable on the aggregate indebtedness is more than 4¾ per cent. For the separate States the average varies considerably, being lowest in the case of Western Australia and highest in that of South Australia, the difference between these two average rates being less than ½ per cent. The table hereunder gives particulars of the rates of interest payable at the 30th June, 1925 :—

STATE PUBLIC DEBTS.—RATES OF INTEREST PAYABLE, 30th JUNE, 1925.

Rate of Interest.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
%	£	£	£	£	£	£	£
7¼ ..	2,311,068	586,414	769,222	513,564	1,380,000	268,649	5,828,917
7 ..	..	..	2,466,091	..	..	..	2,466,091
£6/15/2 ..	1,250,000	631,248	10,742	..	477,802	..	2,369,792
£6/14/– ..	..	..	91,645	..	500,000	19,280	610,925
6½ ..	6,500,000	..	3,100,690	3,000,000	250,000	3,436,665	16,287,355
£6/7/– ..	4,535,099	5,523,543	1,580,780	1,730,158	1,939,883	900,000	16,209,463
6¼ ..	..	..	..	..	..	164,644	164,644
£6/3/6 ..	..	..	502,000	..	..	..	502,000
£6/2/2 ..	..	..	362,000	..	..	..	362,000
£6/1/3 ..	..	..	386,000	..	..	..	386,000
6 ..	17,369,981	5,841,701	6,544,776	16,194,145	6,824,158	2,202,676	54,977,437
5¾ ..	25,914,452	750,000	..	..	1,500,000	290	28,164,742
£5/13/2 ..	..	..	..	28,796	..	..	28,796
5½ ..	30,742,471	23,296,771	19,399,624	12,895,448	3,996,672	2,377,904	92,708,890
£5/6/11 ..	2,124,411	3,563,724	501,241	522,283	1,045,559	600,000	8,357,218
£5/5/3 ..	85,405	1,581,146	309,730	67,000	87,958	341,635	2,472,874
5¼ ..	4,146,891	7,809,845	1,963,050	1,699,751	347,535	..	15,967,072
5 ..	40,112,335	33,986,912	17,381,369	11,442,091	6,544,987	2,226,118	111,693,813
4⅞ ..	..	100,000	..	..	..	..	100,000
4¾ ..	..	6,085,980	..	500,000	..	..	6,585,980
£4/14/5 ..	7,400,000	3,900,000	..	2,706,000	3,231,931	1,000,000	18,237,931
4½ ..	19,265,234	929,115	5,150,898	229,578	5,482,868	401,177	31,458,870
4¼ ..	..	637,400	..	..	..	140,750	778,150
4 ..	20,994,789	5,468,699	12,823,700	7,463,391	9,566,418	4,551,668	60,868,665
3¾ ..	1,912,025	220,000	2,025,300	3,979,380	1,650,000	..	9,786,705
3½ ..	14,018,456	17,867,385	15,530,826	5,846,380	12,317,490	4,812,959	70,393,496
3 ..	16,648,493	9,665,682	5,489,383	5,962,870	7,350,000	450,000	45,566,428
Not fixed ..	..	2,724,000	..	..	..	..	2,724,000
Total ..	215,331,110	131,169,565	96,389,067	74,780,835	64,493,261	23,894,416	606,058,254
Average rate	£4/18/10	£4/16/3	£4/15/10	£4/19/3	£4/10/8	£4/18/0	£4/16/11

(ii) *All States, 1921 to 1925.* The rapid increase recently in the amounts bearing interest at the higher rates is exhibited in the table hereunder, which shows the aggregate amount of indebtedness at the several rates of interest at the 30th June in each of the years 1921 to 1925 :—

STATE PUBLIC DEBTS.—RATES OF INTEREST PAYABLE, 30th JUNE, 1921 TO 1925.

Rate of Interest.	30th June, 1921.	30th June, 1922.	30th June, 1923.	30th June, 1924.	30th June, 1925.
%	£	£	£	£	£
7½	100,090	122,123	144,015	144,015	..
7¼	..	4,499,529	5,790,670	5,890,671	5,828,917
7	..	2,466,091	2,466,091	2,466,091	2,466,091
£6/15/2	..	2,369,792	2,369,792	2,369,792	2,369,792
£6/14/– ..	..	..	..	519,280	610,925
£6/13/10	123,991	..	..	..	..
6½	11,972,379	16,149,635	16,306,663	16,317,190	16,287,355
£6/7/–..	16,209,462	16,209,463	16,209,463	16,209,463	16,209,463
6¼	5,100,770	8,651,849	5,696,341	266,430	164,644
£6/3/6..	..	..	..	..	502,000
£6/2/2..	..	..	..	..	362,000
£6/1/3..	..	..	..	..	386,000
6	6,545,219	30,630,929	29,807,617	33,475,342	54,977,437
5¾	20,171,777	31,565,051	32,539,261	30,677,685	28,164,742
£5/13/2	28,796	28,796	28,796	28,796	28,796
5½	47,234,718	58,264,168	66,573,879	80,310,921	92,708,890
£5/6/11	8,357,218	8,357,218	8,357,218	8,357,218	8,357,218
£5/5/3..	3,088,428	3,012,870	2,980,759	2,472,947	2,472,874
5¼	24,272,989	24,111,789	24,082,463	16,230,527	15,967,072
£5/3/10	13,571	..	..	..	..
5	19,443,800	18,657,115	38,526,496	94,794,861	111,693,813
4⅞	..	1,000,000	1,050,000	350,000	100,000
4¾	6,582,390	2,148,160	2,406,010	1,335,980	6,585,980
£4/14/5	..	..	18,000,000	18,106,000	18,237,931
£4/14/3	11,874	5,010	398	..	..
4½	29,236,033	29,966,961	38,823,200	44,921,339	31,458,870
4¼	837,010	837,010	874,410	874,410	778,150
4⅛	18,000,000	18,000,000	..	..	..
4	86,904,348	84,773,988	77,444,696	69,732,087	60,868,665
3¾	13,265,810	12,213,148	11,583,660	10,027,900	9,786,705
3½	111,123,493	103,420,420	102,811,575	93,081,666	70,393,496
3¼	24,718	..	..	..	..
3	46,198,575	46,028,274	46,005,168	46,403,876	45,566,428
Not fixed	..	..	..	..	2,724,000
Total	474,847,459	523,489.389	550,878,641	595,364,487	606,058,254
Average rate	£4/7/8	£4/12/0	£4/13/0	£4/14/4	£4/16/11

The increase in the average rate started in 1912, but was accelerated by the war, which has virtually made 5 per cent. the present minimum rate of interest for gilt-edged securities. The average rate is likely to rise for some time, since many of the securities falling due in the near future will have to be renewed at a higher rate of interest than they are at present bearing.

5. **Interest per Head.**—The relative burden of the State debts in respect of interest will be seen from the following table, which gives for the 30th June, 1925, the amount of interest payable on the public debt outstanding at that date, and the corresponding amount per head of population :—

STATE PUBLIC DEBTS.—INTEREST PAYABLE, 30th JUNE, 1925.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Total annual interest payable ..	10,639,953	6,319,121	4,617,534	3,710,512	2,922,254	1,171,119	29,380,493
Annual interest payable per head ..	£4/13/8	£3/15/8	£5/8/0	£6/16/8	£7/18/10	£5/10/6	£4/19/1

6. **Dates of Maturity.**—Securities like the British Consols are interminable, but Australian debts have in most cases a fixed date for repayment, there being a few exceptions which are included in the following table under the headings "interminable," "interminable at Government option," and "not yet fixed." Those "interminable at

Government option" include amounts which are payable by the respective Governments after giving a specified notice, and those "not yet fixed" consist of certain amounts owing to the Commonwealth Government. In most cases at date of maturity renewal is effected in respect of the greater portion of the loan, as provision for redemption has been made in exceptional cases only. In order to avoid application to the market at an unfavourable time, several States have adopted the practice of specifying a period prior to the date of maturity within which the Government, on giving twelve, or in some cases six months' notice, has the option of redeeming the loan. The Government can, therefore, take advantage of opportunities that may offer during the period for favourable renewals. Particulars concerning the due dates of the State loans outstanding on the 30th June, 1925, are given in the following table.

Those loans in the case of which the Government has the option of redemption during a specified period have been in each instance classified according to the latest date of maturity.

While the latest dates of maturity of the various loans extend over the period 1925 to 1975, the average for the States as a whole is slightly more than 14½ years.

STATE PUBLIC DEBTS.—DUE DATE OF AMOUNT OUTSTANDING ON 30th JUNE, 1925.

Year of Maturity.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
Overdue ..	102,518	18,400	..	..	..	..	120,918
1925	7,400,800	7,060,360	278,000	4,942,583	3,268,260	1,743,885	24,693,888
1926	7,202,941	6,115,367	963,300	4,174,639	2,621,374	883,702	21,961,323
1927	18,386,676	4,848,600	4,824,150	6,958,659	6,146,669	1,941,462	43,106,216
1928	1,165,611	12,341,062	846,800	2,319,659	199,844	1,336,891	18,209.867
1929	1,306,990	14,056,631	12,862,434	3,483,234	714,959	1,428,653	33,852,901
1930	7,097,706	10,574,956	5,647,510	6,538,028	1,099,942	371,692	31,329,834
1931	3,485,242	1,399,938	..	204,426	14,659	210,761	5,315,026
1932	14,214,200	2,037,366	..	22,090	1,183,654	35,075	17,492,385
1933	17,838,922	332,960	..	2,354,818	965,879	350,500	21,843,079
1934	14,347,823	8,092,575	2,771,590	4,265,187	2,012,247	..	31,489,422
1935	20,943,201	1,231,229	397,270	5,876,491	8,830,485	371,608	37,650,284
1936	92,150	300,000	2,920,690	5,203,680	1,240,000	6,000	9,762,520
1937	98,700	40,000	..	16,400	..	5,816	160,916
1938	84,450	...	2,352,177	101,440	885,560	..	3,423,627
1939	2,900	312	..	2,734,050	106,603	..	2,843,865
1940	16,506,000	4,248,900	2,000,000	6,014,861	4,500,000	7,810,022	41,079,783
1941	5,100	324,380	2,928,391	..	..	36,647	3,294,518
1942	4,008,100	14,485,100	15,000	6,650,300	61,697	1,150,000	26,370,197
1943	765,700	3,600	..	1,037,925	756,100	..	2,563,325
1944	252,900	400	..	..	..	..	253,300
1945	11,006,000	1,856,943	7,556,559	798,812	5,906,027	200,000	27,324,341
1946	..	217,400	..	..	..	250,000	467,400
1947	3,200	..	6,553,769	..	2,250,000	..	8,806,969
1948	6,500	..	..	..	..	..	6,500
1949	2,900	11,699,371	..	..	..	42,000	11,744,271
1950	22,061,783	11,886,075	10,138,828	2,861,801	5,431,202	4,929,564	57,309,253
1951	..	..	999,600	..	..	..	999,600
1952	3,100	..	125,400	..	..	..	128,500
1953	6,500	..	2,147,809	..	..	..	2,154,309
1954	2,900	123,874	..	..	..	..	126,774
1955	22,001,500	..	..	..	4,437,000	..	26,438,500
1960	..	8,979,700	17,728,800	3,000,000	1,000,000	..	30,708,500
1962	10,500,000	..	..	..	6,000,000	..	16,500,000
1964	..	..	..	..	1,566,000	..	1,566,000
1965	6,500,000	..	..	..	3,000,000	..	9,500,000
1970	..	..	2,000,000	..	..	..	2,000,000
1975	..	100,000	..	..	..	..	100,000
Interminable ..	532,889	..	1,394,000	98,382	..	..	2,025,271
Interminable at Government option	7,395,208	5,749,732	..	5,123,370	..	..	18,268,310
Annual Drawings	..	..	71,132	..	25,100	..	96,232
Half-yearly ,,	..	..	8,865,858	..	..	790,138	9,655,996
Date not fixed ..	..	3,044,334	..	..	270,000	..	3,314,334
Total ..	215,331,110	131,169,565	96,389,067	74,780,835	64,493,261	23,894,416	606,058.254
Average date of maturity ..	14.99 years	12.55 years	18.74 years	10.09 years	17.61 years	12.80 years	14.64 years

7. Sinking Funds.—The practice of providing sinking funds has been consistently adopted in the case of Western Australia only. This State has established, in connexion with each of its loans, sinking funds varying from 1 per cent. to 3 per cent. per annum of the nominal amount of the loan. The funds are placed with trustees in London, by whom they are invested in securities, and applied from time to time to the redemption of loans falling due. In the other States the sinking fund provision made is varied, consisting in certain instances of the revenues from specified sources, in others of the Consolidated Revenue Fund surplus, and in others again of fixed annual amounts. The following table gives the sinking funds and net indebtedness of each State at the 30th June, 1925 :—

STATE SINKING FUNDS AND NET INDEBTEDNESS, 30th JUNE, 1925.

State.	Gross Indebtedness.	Sinking Fund.	Net Indebtedness.	Net Indebtedness per Head.		
	£	£	£	£	s.	d.
New South Wales ..	215,331,110	578,184	214,752,926	94	10	6
Victoria	131,169,565	4,084,796	127,084,769	76	1	2
Queensland.. ..	96,389,067	1,107.554	95,281,513	111	8	3
South Australia ..	74,780,835	1,270,118	73,510,717	135	7	0
Western Australia ..	64,493,261	10,183.347	54,309,914	147	11	5
Tasmania	23,894,416	1,406,952	22,487,464	106	2	5
Total ..	606,058,254	18,630,951	587,427,303	99	1	5

C. COMMONWEALTH AND STATE PUBLIC DEBTS.

The table hereunder, showing the public debts of the Commonwealth and the States, contains a column headed "deduction for debts counted twice." For each year this includes certain advances made by the Commonwealth to the States.

COMMONWEALTH AND STATE PUBLIC DEBTS, 1920-21 TO 1924-25.

Year ended 30th June—	Public Debt of Commonwealth.	Public Debt of States.	Aggregate.	Deduction for Debts Counted Twice.	Balance, *i.e.*, Public Debt of Australia.	Public Debt per Capita.		
	£	£	£	£	£	£	s.	d.
1921..	401,720,024	474,847,459	876,567,483	48,551,637	828,015,846	151	15	7
1922..	416,070,509	523,489,389	939,559,898	55,182,665	884,377,233	158	16	8
1923..	410,996,316	550,878,641	961,874,957	56,390,011	905,484,946	159	3	9
1924..	415,600,099	595,364,487	1,010,964,586	55,953,000	955,011,586	164	11	1
1925..	430,948,062	606,058,254	1.037,006.316	71,135,472	965,870,844	162	17	11

A series of graphs illustrating the rise in the revenue, public debt, and taxation of the Commonwealth and States since 1902, the year 1901-2 being the first complete financial year since Federation, accompanies this chapter.

D. THE AUSTRALIAN LOAN COUNCIL.

The Australian Loan Council, consisting of the Treasurers of the Commonwealth and of the States, was created as the result of representations made by the Commonwealth Government, and has for its object the prevention of undue competition and clashing in the raising of loans.

At its first meeting, held on 1st February, 1924, the Loan Council recognized the necessity for co-operation in the raising of loans. The terms to be offered by the several governments for loans in Australia up to 30th June, 1924, were agreed to, and arrangements were made to prevent unnecessary clashing during the period required by the Commonwealth for the flotation of its War Gratuity Redemption and Conversion Loan.

The loan operations of the Commonwealth and States in 1924–25 were conducted in accordance with the plans adopted by the Council. The Council, acting as a central borrowing authority, issued two loans in Australia on behalf of the States—one for £10,300,000 of new money for State Public Works, and one for the conversion or redemption of £4,909,850 of maturing State securities.

The chief problem confronting the Council in 1925–26 was the conversion of £67,000,000 of Commonwealth War Loan maturing on 15th December, 1925. It was agreed that no other borrowing should be undertaken in Australia during the period required for this conversion.

Up to June, 1925, the Commonwealth and States issued their own loans in London and elsewhere outside Australia, but the amounts were limited to sums agreed upon at the Loan Council by the several Treasurers. About the middle of 1925, however, the Loan Council decided that there should be no competition for loans in the American market, and that borrowing in America, and borrowing simultaneously in America and London, on behalf of the Commonwealth and the States, should be conducted solely by the Commonwealth. The successful flotation in July, 1925, of a loan of £20,000,000 in London and New York was regarded as proof of the soundness of the Council's new policy.

Until July, 1925, the Council consisted of the Treasurers of the Commonwealth and of each of the States, but in August of that year the Treasurer of New South Wales withdrew from the Council.

E. PRIVATE FINANCE.

§ 1. Coinage.

1. **Australian Mints.**—(i) *General.* Soon after the discovery of gold in Australia steps were taken for the establishment of a branch of the Royal Mint in Sydney The formal opening took place on the 14th May, 1855. The Melbourne branch was opened on the 12th June, 1872, and the Perth branch on the 20th June, 1899. The States of New South Wales, Victoria, and Western Australia provide an annual endowment in return for which the mint receipts are paid into the respective State Treasuries, and it might be said until recently that, apart from expenditure on buildings, new machinery, etc., the accounts paid into the Treasuries fairly balanced the mint subsidies. Early in 1923, however, it was announced that owing to losses incurred in the operations of recent years, the New South Wales Government had decided to close the Sydney branch at the end of 1923. This decision has, however, not yet been carried out.

(ii) *Gold Receipts and Issues in 1925.* (*a*) *Assay of Deposits Received.* The deposits received during 1925 at the Sydney Mint reached a gross weight of 1,535,336 ozs. , at the Melbourne Mint, a gross weight of 832,754 ozs. ; and at the Perth Mint, a gross weight of 555,737 ozs. The average composition of these deposits in Sydney was, gold 986.5, silver 4.8, base 8.7, in every 1,000 parts ; Melbourne, gold 972.4, silver 9.8, base 17.8, in every 1,000 parts ; and Perth, gold 784.5, silver 148.7, base 66.8, in every 1,000 parts.

(*b*) *Issues.* The Australian mints, besides issuing gold coin in the shape of sovereigns and half-sovereigns, also issue gold bullion, partly for the use of local manufacturers (jewellers and dentists), and partly for export, India taking a considerable quantity of gold cast into 10-oz. bars. During recent years the export was subject to regulation by the Commonwealth Government, but the embargo was lifted in 1925. The issues during 1925 are shown in the table below :—

AUSTRALIAN MINTS.—ISSUES OF GOLD, 1925.

Mint.	Coin.			Bullion.	Total.
	Sovereigns.	Half-sovereigns.	Total.		
	£	£	£	£	£
Sydney ..	5,632,000	..	5,632,000	9,347	5,641,347
Melbourne ..	3,311,662	...	3,311,662	127,584	3,439,246
Perth ..	1,837,901	..	1,837,901	4,408	1,842,309
Total ..	10,781,563	..	10,781,563	141,339	10,922,902

(*c*) *Withdrawals of Worn Coin.* The mints receive light and worn coin for recoinage. The total withdrawals of worn gold coin were as follows :—Sydney, £1,091,547 ; Melbourne, £865,392 (since and including 1890) ; Perth, £1,401.

(iii) *Total Gold Receipts and Issues.* (*a*) *Receipts.* The total quantities of gold received at the three mints since their establishment are stated in the gross as follows :—Sydney, 41,952,025.40 ozs. ; Melbourne, 40,616,967.85 ozs. ; and Perth, 30,721,403 ozs. As the mints pay for standard gold (22 carats) at the rate of £3 17s. 10½d. per oz., which corresponds to a value of £4 4s. $11\frac{5}{11}$d. per oz. fine (24 carats), it is possible to arrive at an estimate of the number of fine ounces from the amounts paid for the gold received. These amounts were :—Sydney, £156,236,640 ; Melbourne, £159,247,938 ; Perth, £106,870,420 ; corresponding to—Sydney, 36,781,231 ozs. fine ; Melbourne, 37,490,152 ozs. fine ; and Perth, 25,159,435 ozs. fine. In the case of deposits containing over a certain minimum of silver, the excess is paid for at the rate fixed from time to time by the Deputy-Master of the branch mint concerned.

(*b*) *Issues.* The total values of gold coin and bullion issued by the three mints are shown in the table hereunder. It may be said that about four-sevenths of the total gold production of Australasia has passed through the three Australian mints, the production of Australia to the end of 1925 being valued at £621,364,054, and that of New Zealand at approximately £94,000,000, or a total of about £715,364,054.

AUSTRALIAN MINTS.—TOTAL ISSUES OF GOLD TO END OF 1925.

Mint.	Coin.			Bullion.	Total.
	Sovereigns.	Half-sovereigns.	Total.		
	£	£	£	£	£
Sydney ..	143,404,500	4,781,000	148,185,500	7,216,169	155,401,669
Melbourne ..	145,776,615	946,780	146,723,395	12,523,507	159,246,902
Perth ..	97,658,113	367,338	98,025,451	8,821,441	106,846,892
Total ..	386,839,228	6,095,118	392,934,346	28,561,117	421,495,463

(iv) *Silver and Bronze Coinage.* (*a*) *Prices of Silver.* The value of silver has greatly decreased since its demonetization and restricted coinage in almost the whole of Europe. A noticeable increase, however, took place for some years after 1915, the price of silver following the general trend of world prices. Its average price in the London market in recent years is shown in the table in Chapter XXI. Mineral Industry.

(*b*) *Profits on Coinage of Silver.* As sixty-six shillings are coined out of one pound troy of standard silver, the silver required to produce £3 6s. of coin was only worth on the average about £1 13s. 2d. during 1924–25; the difference represents, therefore, the gross profit or seigniorage made on the coinage of every £3 6s. Negotiations for the coinage of silver and bronze coin in Australia took place for a number of years between the Imperial authorities and the Governments of New South Wales and Victoria, but no decision was arrived at. As section 51 of the Commonwealth Constitution makes legislation concerning "currency, coinage, and legal tender" a Federal matter, the question remained in abeyance until 1907, when the matter was discussed at the Colonial Conference, London, with the result that in the latter part of 1908 the Commonwealth Treasurer announced his intention of initiating the coinage. Since 1916 silver and bronze coins have been minted in Australia on behalf of the Commonwealth Treasury.

(*c*) *Silver and Bronze Issues.* The total issues of silver and bronze coinage on account of the Commonwealth since 1910 as obtained from returns furnished by the Treasury, are set out in the following table :—

AUSTRALIAN MINTS.—SILVER AND BRONZE ISSUES, 1910 TO 1925.

Year.	Silver.					Bronze.		
	2/–.	1/–.	6d.	3d.	Total.	1d.	½d.	Total.
	£	£	£	£	£	£	£	£
1910–18 ..	1,730,950	1,138,600	303,700	295,100	3,468,350	92,220	42,950	135,170
1919	98,600	48,900	28,500	37,725	213,725	29,204	9,930	39,134
1920	94,800	93,000	54,800	53,775	296,375	33,320	8,555	41,875
1921	118,300	58,400	72,500	82,900	332,100	30,779	10,525	41,304
1922	129,100	37,400	40,400	40,650	247,550	31,770	4,400	36,170
1923 (30th June)	50,850	35,900	13,100	7,000	106,850	9,650	370	10,020
1923–24 ..	146,200	58,800	25,400	29,250	259,650	30,650	4,560	35,210
1924–25 ..	150,000	16,800	25,900	34,150	226,850	20,000	420	20,420
Total ..	2,518,800	1,487,800	564,300	580,550	5,151,450	277,593	81,710	359,303

(*d*) *Withdrawals of Worn Silver Coin.* The value of worn silver coins received during 1925 was as follows :—Sydney, £77,400 ; Melbourne, £187,383 ; Perth, £8,001. The total withdrawals of worn silver coin were :—Sydney, £1,236,172 ; Melbourne, £1,090,511 ; Perth, £85,607.

(v) *Standard Weight and Fineness of Coinage.* The coinage of Australia, so far as the coins minted are concerned, is the same as that of the United Kingdom, and the same provisions as to legal tender apply, viz., gold coins are legal tender to any amount, silver for an amount not exceeding forty shillings, and bronze up to one shilling. As will be seen from the table below, the standard weights of the sovereign and half-sovereign are respectively 123.27447 grains and 61.63723 grains, but these coins will pass current if they do not fall below 122.5 grains and 61.125 grains respectively.

AUSTRALIAN COINAGE—STANDARD WEIGHT AND FINENESS.

Denomination.	Standard Weights.	Standard Fineness.	
	Grains.		
GOLD—		Eleven-twelfths fine gold, viz.—	
Sovereign ..	123.27447	Gold .. 0.91667	1.00000
Half-sovereign ..	61.63723	Alloy .. 0.08333	
SILVER—			
Florin	174.54545	Thirty-seven-fortieths fine silver, viz. :—	
Shilling ..	87.27272	Silver .. 0.925	1.000(*a*)
Sixpence ..	43.63636	Alloy .. 0.075	
Threepence ..	21.81818		
BRONZE—		Mixed metal, viz. :—	
Penny ..	145.83333	Copper .. 0.95	1.00
Halfpenny ..	87.50000	Tin .. 0.04	
		Zinc .. 0.01	

(*a*) The fineness of Australian silver coins is still 925, but since December, 1920, the fineness of British silver coins has been reduced to 500.

§ 2. Cheque-Paying Banks.

1. **Banking Legislation.**—(i) *Commonwealth Legislation.* Under Section 51 of the Commonwealth Constitution Act the Commonwealth Parliament has power to legislate with respect to " Banking, other than State banking, also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money." Legislation under this authority comprises the following Acts : No. 27 of 1909, dealing with Bills of Exchange, Cheques, and Promissory Notes ; No. 11 of 1910, dealing with Australian Notes ; and No. 14 of 1910, a Bank Notes Tax Act. The Notes Act and the Bank Notes Tax Act were supplemented in the following year by the passing of No. 18

of 1911, "An Act to provide for a Commonwealth Bank," which passed both Houses and was assented to on 22nd December, 1911. Some account of the foundation of the Bank appeared in No. 6 to No. 10 issues of the Official Year Book.

As the initial expenses of the bank were heavy, the early operations resulted in a small loss, but with the increasing prosperity of the institution the early deficit was gradually reduced, until on 30th June, 1915, it was entirely extinguished. The following table shows the aggregate net profits from the initiation of the bank to the end of each of the last five financial years :—

COMMONWEALTH BANK.—AGGREGATE PROFITS, 1921 TO 1925.

Date.	Aggregate Net Profit to Date.		
	General Bank.	Savings Bank.	Total.
	£	£	£
30th June, 1921	3,082,249	369,116	3,451,365
,, 1922	3,577,317	424,342	4,001,659
,, 1923	3,869,219	534,768	4,403,987
,, 1924	3,964,620	690,053	4,654,673
,, 1925	4,098,392	890,838	4,989,230

In accordance with the provisions of section 30 of the Bank Act and section 9 (2) of the National Debt Sinking Fund Act, half of the net profits of the Bank have been placed to the credit of the Bank's Reserve Fund and half to the credit of the National Debt Sinking Fund. Up to 30th June, 1925, the latter fund has benefited to the extent of £292,620.

The Commonwealth Bank Act, 1924 was assented to on 20th August, 1924, and was brought into operation on 10th October, 1924. This Act was passed to broaden the scope of the Commonwealth Bank and to enable it to perform the functions for which it had been established. Five main amendments to the Bank Act 1911–20 are included, in accordance with which the following changes have been made :—(1.) A Board of Directors has been appointed to control not only the general business, but also that of the note issue. The Board consists of the Governor of the Bank, the Secretary to the Treasury, and six others who are or have been actively engaged in agriculture, commerce, finance or industry. In addition to the above Board there is a Board of Advice in London. (2.) The bank has been strengthened by the capitalization of £4,000,000 of the accumulated profits, and the Treasurer is authorized to raise by loans sums aggregating £6,000,000 and to lend the proceeds to the Commonwealth Bank as additional capital. The Ministry does not propose to interfere with the authority already included in the Commonwealth Bank Act to issue debentures up to £10,000,000. (3.) The Board is to fix and publish its discount rate. (4.) The associated banks settle their exchanges through the Commonwealth Bank. (5.) The associated banks supply to the Treasurer each quarter a statement of average weekly liabilities and assets in accordance with the schedule prescribed.

(ii) *State Legislation.* The Acts under which the various banks are incorporated differ somewhat. While most of the older banks were incorporated by special Act or Charter, *e.g.*, the Bank of New South Wales, by Act of Council 1817 ; the Bank of Australasia, by Royal Charter ; the Bank of Adelaide, by Act of the South Australian Parliament ; and the Bank of New Zealand, by Act of the General Assembly of New Zealand, the newer banks are generally registered under a "Companies Act," or some equivalent Act. This is also the case with those banks which, after the crisis of 1893, were reconstructed.

(iii) *Australian Note Issue.* In December, 1920, the Australian Note Issue was handed over to the control of the Commonwealth Bank, the notes, however, still remaining Treasury Notes. The Note Issue Department of the Bank is administered by the above-mentioned Board of Directors. The notes in circulation on 29th June, 1925, amounted to £53,890,226, of which approximately 58 per cent. was held by the Banks and 42 per cent. by the public. Against this there was a reserve of gold coin amounting to £25,841,027, or nearly 48 per cent., and other assets including investments of £28,049,199. The investments are set out in detail as follows :—

AUSTRALIAN NOTES ACCOUNT.—PARTICULARS OF INVESTMENTS AS AT 30th JUNE, 1925.

Investment.	Amount.	Rate of Interest.	Date of Maturity.	Annual Amount of Interest.
	£	%		£
Commonwealth Inscribed Stock	3,014,716	3½	1/4/62 to 1/4/72	105,515
Commonwealth Inscribed Stock	2,505,750	6	31/5/26 and 31/5/27	150,345
Commonwealth War Loan	63,640	4½	15/12/25	2,864
New South Wales Treasury Bills	7,400,000	4/14/5	31/12/25	349,354
Victorian Debentures (face value £100,000)	98,000	5½	1/7/25	5,500
Victorian Debentures (face value £50,000)	49,000	5½	1/7/26	2,750
Victorian Debentures	3,900,000	4/14/5	31/12/25	184,119
Victorian Inscribed Stock	583,000	5¼	1/4/34	30,607
Queensland Securities	1,490,000	5¼	1/4/34	78.225
South Australian Treasury Bills (face value £2,706,000)	2,600,000	4/14/5	31/12/25	127,750
South Australian Securities	326,000	5¼	1/4/34	19,560
Western Australian Stock	590,000	3¾	1/1/26	22,125
Western Australian Treasury Bills	3,100,000	4/14/5	1934	146,351
Western Australian Securities	335,000	5¼	1/4/34	17,587
Tasmanian Inscribed Stock	50,000	5½	1/10/25	2,750
Tasmanian Treasury Bills	1,000,000	4/14/5	31/12/25	47,210
Tasmanian Securities	469,000	5	1932	24,622
Total	(*a*)27,574,106	..	..	1,317,234

(*a*) Exclusive of other assets amounting to £475,093.

2. **Banks in Operation.**—The twenty-one banks trading in Australia at the 30th June, 1925, are arranged in the table hereafter according to the situation of their head offices. Where reference to the banks is made by name they will be dealt with in the order thus given, with the exception of the Commonwealth Bank, which is placed first :—

CHEQUE-PAYING BANKS AT 30th JUNE, 1925.

Bank.	Head Office.
Commonwealth Bank of Australia	Sydney
Joint Stock Banks—	
Bank of Australasia	London
Union Bank of Australia Limited	,,
English, Scottish, and Australian Bank Limited	,,
Bank of New South Wales	Sydney
Commercial Banking Company of Sydney Limited	,,
Australian Bank of Commerce Limited	,,
Primary Producers' Bank of Australia Limited	,,
National Bank of Australasia Limited	Melbourne
Commercial Bank of Australia Limited	,,
Bank of Victoria Limited	,,
Royal Bank of Australia Limited	,,
Ballarat Banking Company Limited	Ballarat
Queensland National Bank Limited	Brisbane
Federal Deposit Bank Limited	,,
Queensland Deposit Bank Limited	,,
Bank of Adelaide	Adelaide
Western Australian Bank	Perth
Bank of New Zealand	Wellington
Comptoir National d'Escompte de Paris	Paris
Yokohama Specie Bank Limited	Yokohama

Amalgamations, which have been such a feature in British banking of late years, have also been effected in Australia, the number of competitive joint stock banks being thereby reduced considerably. During the calendar years 1917 and 1918 the following were recorded:—(*a*) the Royal Bank of Queensland Limited with Bank of North Queensland Limited; (*b*) City Bank of Sydney with Australian Bank of Commerce Limited; (*c*) National Bank of Tasmania Limited with Commercial Bank of Australia Limited; and (*d*) National Bank of Australasia Limited with Colonial Bank of Australasia Limited. A further amalgamation took place in August, 1920, viz., the London Bank of Australia Ltd. and the English, Scottish and Australian Bank Ltd., and these banks absorbed the Commercial Bank of Tasmania in May, 1921. The National Bank of Australasia also absorbed the Bank of Queensland.

3. Capital Resources. The paid-up capital of the cheque paying banks, together with their reserve funds, the rate per cent., and the amount of their last dividends, are shown in the table hereunder. The information relates to the balance sheet last preceding the 30th June, 1925. In regard to the reserve funds it must be noted that in the case of some of the banks these are invested in Government securities, while in other cases they are used in the ordinary business of the banks, and in a few instances they are partly invested and partly used in business :—

CHEQUE-PAYING BANKS.—CAPITAL RESOURCES, 30th JUNE, 1925.

Bank.	Paid-up Capital.	Rate per cent. per annum of last Dividend and Bonus.	Amount of last Half-yearly Dividend and Bonus.	Amount of Reserved Profits.
	£	%	£	£
Commonwealth Bank of Australia ..	4,000.000	..	..	696,608
Joint Stock Banks—				
Bank of Australasia	4,000,000	10 and Bonus 3	260,000	3,830,330
Union Bank of Australia Ltd.	3,500.000	15	225,000	4,140,003
English, Scottish and Australian Bank Ltd.	2,250,000	12½	187,500	1,950,102
Bank of New South Wales	6,000,000	10	150,000 (*a*)	4,301,372
Commercial Banking Coy. of Sydney Ltd.	3,500,000	10	174,920	2,789,886
Australian Bank of Commerce Ltd. ..	1,840,000	7	42,000	410,517
Primary Producers' Bank of Australia Ltd.	299,546	..	..	4,099
National Bank of Australasia Ltd. ..	4,000,000	10	200,000	2,414,704
Commercial Bank of Australia Ltd. ..	2,860,805	4 Pref., 15 Ord.	82,290	611,708
Bank of Victoria Ltd.	1,478,010	9	66,510	812,478
Royal Bank of Australia Ltd.	750,000	10	37,500	651,898
Ballarat Banking Coy. Ltd.	127,500	8	5,100	66,034
Queensland National Bank Ltd. ..	1,453,551	10	30,000 (*a*)	670,685
Federal Deposit Bank Ltd.	122,255	12	6,135	84,517
Queensland Deposit Bank Ltd. ..	47,378	8	1,709	46,000
Bank of Adelaide	875,000	10	43,750	807,741
Western Australian Bank	700,000	17½	43,750	1,026,538
Total Australian Banks	37,804,045	..	1,556,104	25,280,880
Bank of New Zealand	6,147,540	10 Pref., 13½ Ord.	562,500	9,088,209
Comptoir National d'Escompte de Paris ..	10,000,000	12	1,200,000 (*b*)	3,042,128
Yokohama Specie Bank Ltd. ..	10,000,000	12	600,000	8,501,705
Grand Total	63,951,585	..	3,018,664	40,003,102

(*a*) Dividend for quarter. (*b*) For twelve months.

4. Liabilities and Assets.—(i) *Liabilities, each State, Quarter ended 30th June, 1925.* Banks transacting business in any State are obliged, under the existing State laws, to furnish a quarterly statement of their assets and liabilities, which contains the averages of the weekly statements prepared by the bank for that purpose, and they have since the year 1908 furnished quarterly statements to the Commonwealth Statistician. As all other financial returns in this work generally refer to a period closing on the 30th June, the banking figures are given throughout for the June quarter of each year. The liabilities are those to the general public, and are exclusive of the banks' liabilities to their shareholders, which are shown in the preceding table. As the Commonwealth Bank also engages in Savings Bank business, it has been deemed desirable to keep the figures for this bank separate from those of the Joint Stock banks. The figures set out in the tables which follow are, therefore, exclusive in every case of the Commonwealth Bank.

JOINT STOCK BANKS—LIABILITIES, JUNE QUARTER, 1925.

State.	Notes in Circulation not Bearing Interest.	Bills in Circulation not Bearing Interest.	Balances Due to Other Banks.	Deposits. Not Bearing Interest.	Deposits. Bearing Interest.	Deposits. Total.	Total Liabilities.
	£	£	£	£	£	£	£
New South Wales	65,724	1,122,024	741,644	45,139,926	53,672,367	98,812,293	100,741,685
Victoria ..	86,969	429,199	1,186,464	33,825,829	51,849,166	85,674,995	87,377,627
Queensland ..	(a)	754,963	354,637	13,949,050	17,315,905	31,264,955	32,374,555
South Australia ..	22,529	82,578	600,726	7,930,701	12,287,016	20,217,717	20,923,550
Western Australia	25,296	151,735	185,842	5,293,526	3,870,718	9,164,244	9,527,117
Tasmania ..	2,357	44,206	163,255	2,335,455	2,913,623	5,249,078	5,458,896
Northern Territory	..	..	7,191	87,756	114,430	202,186	209,377
Total ..	202,875	2,584,705	3,239,759	108,562,243	142,023,225	250,585,468	256,612,807

(a) In Queensland, Treasury Notes were used instead of banknotes.

(ii) *Liabilities, all States, June Quarters, 1921 to 1925.* In the next table, which shows the average liabilities of the Joint Stock Banks for the quarters ended 30th June, 1921 to 1925, for Australia as a whole, the growth in liabilities is entirely due to an increase in the deposits bearing interest.

JOINT STOCK BANKS—LIABILITIES, JUNE QUARTER, 1921 TO 1925.

Year.	Notes in Circulation not Bearing Interest.	Bills in Circulation not Bearing Interest.	Balances Due to Other Banks.	Deposits. Not Bearing Interest.	Deposits. Bearing Interest.	Deposits. Total.	Total Liabilities.
	£	£	£	£	£	£	£
1921 ..	213,868	2,207,959	5,602,725	111,822,644	109,718,452	221,541,096	229,565,648
1922 ..	209,894	2,132,280	4,273,238	104,582,491	117,776,754	222,359,245	228,974,657
1923 ..	207,228	2,279,149	3,724,411	108,937,936	131,903,047	240,840,983	247,051,771
1924 ..	204,830	2,439,885	4,037,173	106,378,836	133,273,020	239,651,856	246,333,744
1925 ..	202,875	2,584,705	3,239,759	108,562,243	142,023,225	250,585,468	256,612,807

(iii) *Assets, each State, Quarter ended 30th June, 1925.* The average assets of the banks are shown in the following table :—

JOINT STOCK BANKS.—ASSETS, JUNE QUARTER, 1925.

State.	Coined Gold and Silver and other Metals.	Gold and Silver in Bullion or Bars.	Government and Municipal Securities.	Landed and House Property.	Notes and Bills of other Banks.	Balances Due from other Banks.	Discounts, Overdrafts, and all other Assets.	Australian Notes and Cash with Commonwealth Bank.	Total Assets.
	£	£	£	£	£	£	£	£	£
N.S.W.	10,096,403	3,352,615	7,347,365	2,714,704	693.606	1.570,711	77,993,259	8,922,762	112,691,425
Victoria	7,272,507	987,728	4,422,831	1,630,648	861,299	810,985	63,181,481	7,362,658	86,530,137
Q'land	1,921,495	8,579	1,079,726	942,295	296,203	382,668	26,738,792	2,464,269	33,834,027
S. Aust.	1,659,786	175	135,616	453,908	124,118	806,114	13,623,369	2,379,490	19,182,576
W. Aust.	1,034,221	134,571	142,489	343,304	131,337	302,361	11,216,634	1,522,580	14,827,497
Tasmania	580,021	10	..	172,187	20,325	47,139	4,688,567	556,947	6,065,196
Nor. Ter.	3,296	1,001	..	500	..	..	8,800	3,197	16,794
Total	22,567,729	4,484,679	13,128,027	6,257,546	2,126 888	3,919,978	197,450,902	23,211,903	273,147,652

(iv) *Assets, all States, June Quarters, 1921 to 1925.* The average assets of the banks for the June quarters of each of the years 1921 to 1925 are given below.

JOINT STOCK BANKS.—ASSETS, JUNE QUARTERS, 1921 TO 1925.

Year.	Coined Gold and Silver and Other Metals.	Gold and Silver in Bullion or Bars,	Landed and Other Property.	Notes and Bills of Other Banks.	Balances Due from Other Banks.	Discounts, Overdrafts, and all Other Assets.(a)	Australian Notes.	Total Assets.
	£	£	£	£	£	£	£	£
1921	19,219.429	549,847	5,112,203	1,467,015	3,294,237	193,301,301	29,570,072	252,514,104
1922	19,010.983	541,200	5,292,681	1,762,379	3,114,741	183.331,660	25,584,150	238,637,794
1923	18,716,430	559,004	5,721,410	1,920,488	5,390.423	203,526,917	25,037,449	260,872,121
1924	19,473,457	570,859	6.057,635	2,037,235	4,901,198	209,981,484	22,944,850	265,966,718
1925	22,567,729	4,484,679	6,257,546	2,126,888	3,919,978	210,578,929	23,211,903(b)	273,147,652

(a) Including Government and Municipal securities.
(b) Including Cash with Commonwealth Bank.

5. **Percentage of Coin, Bullion, and Australian Notes on Liabilities at Call.**—(i) *General.* Although it is not strictly correct to assume that the division of deposits into those bearing interest and not bearing interest would in every case coincide with a division into fixed deposits and current accounts, the division, in default of a better one, is adopted, and in the following table " liabilities at call " are therefore understood to include the note circulation of the banks and the deposits not bearing interest. Since 1912, however, the former item has steadily decreased, and is now almost negligible as compared with the latter.

JOINT STOCK BANKS.—PERCENTAGE ON LIABILITIES OF COIN, BULLION, AND AUSTRALIAN NOTES, 1921 TO 1925.

Year.	Liabilities at Call.	Coin, Bullion, and Australian Notes.	Percentage on Liabilities at Call.
	£	£	%
1921	112,036,512	49,339,348	44.04
1922	104,792,385	45,136,333	43.07
1923	109,145,164	44,312,883	40.60
1924	106,583,666	42,989,166	40.33
1925	108,765,118	50,264,311	46.21

The figures in the last column show that the banks generally consider it advisable to hold from 40 to 50 per cent. of the amount of liabilities at call in coin, bullion, and notes.

(ii) *Queensland Treasury Notes.* In Queensland, Treasury notes took the place of bank notes in 1893. These Treasury notes are disregarded in the quarterly statements of the banks; according to Treasury returns the amount outstanding on 30th June, 1925, was £22,831. Under the Australian Notes Act, previously referred to, the issue of notes by a State is now prohibited.

(iii) *Percentage in each State.* The proportion of coin, bullion, and Australian notes to liabilities at call varies considerably amongst the States, and sometimes in the same State from year to year. A table is appended showing the percentage for each State for the quarter ended 30th June in each of the years 1921 to 1925 :—

JOINT STOCK BANKS.—PERCENTAGE ON LIABILITIES AT CALL OF COIN, BULLION, AND AUSTRALIAN NOTES, 1921 TO 1925.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	All States.
	%	%	%	%	%	%	%	%
1921 ..	43.43	45.38	34.29	49.51	54.34	56.55	13.64	44.04
1922 ..	40.79	44.61	32.95	57.26	54.99	52.38	14.51	43.07
1923 ..	39.46	40.82	31.54	54.32	50.68	45.54	10.96	40.60
1924 ..	39.99	39.85	33.20	49.96	48.96	42.61	11.29	40.33
1925 ..	49.49	46.07	31.50	50.79	50.60	48.63	8.43	46.21

6. **Deposits and Advances.**—(i) *Deposits.* The amount and average per head of population of deposits held by the banks during each of the last five years are given hereunder.

JOINT STOCK BANKS.—DEPOSITS, 1921 TO 1925.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	All States.
				TOTAL.				
	£	£	£	£	£	£	£	£
1921	85,932,196	75,524,209	26,063,176	18,969,502	8,879,346	5,943,048	229,619	221,541,096
1922	86,960,221	76,546,572	26,655,927	18,499,834	8,523,244	4,988,004	185,443	222,359,245
1923	94,079,939	85,135,739	28,442,137	18,486,483	9,185,087	5,333,688	177,910	240,840,983
1924	90,529,921	84,301,488	29,649,564	20,085,213	9,236,755	5,661,494	187,421	239,651,856
1925	98,812,293	85,674,995	31,264,955	20,217,717	9,164,244	5,249,078	202,186	250,585,468
				PER HEAD OF POPULATION.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1921	40 17 0	49 5 0	34 4 6	38 4 7	26 13 0	27 18 6	58 18 2	40 13 10
1922	40 10 7	48 17 1	34 4 9	36 13 10	25 2 10	23 5 8	50 7 0	40 1 0
1923	42 19 4	53 1 6	35 11 2	35 16 8	26 9 5	24 16 3	49 3 2	42 8 9
1924	40 13 4	51 9 0	36 1 7	38 1 3	25 15 5	26 8 6	52 1 6	41 0 7
1925	43 9 6	51 6 8	36 16 9	37 5 7	24 19 1	24 12 7	54 13 9	42 7 0

(ii) *Advances.* In the quarterly statements furnished by the banks, the column headed "all other debts due to the banks" is made up of such miscellaneous items as bills discounted, promissory notes discounted, overdrafts on personal security, overdrafts secured by deposit of deeds or by mortgage, etc. The form prescribed for quarterly returns furnished to the Commonwealth Statistician in 1908 and 1909 provided for a division of the amounts under this heading into a number of sub-headings, but all the banks were not in a position to make the necessary division, and as it is impossible to separate these items the totals in the column must, therefore, be treated as advances. The following table shows the totals for each State during the years 1921 to 1925:—

JOINT STOCK BANKS.—ADVANCES, 1921 TO 1925.

Year	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	All States.
	£	£	£	£	£	£	£	£
1921	73,244,709	55,681,441	22,158,802	12,787,356	9,883,544	4,760,431	22,852	178,539,135
1922	67,724,902	53,151,759	21,173,091	12,246,764	9,571,052	4,226,561	12,742	168,106,871
1923	74,737,819	61,055,847	23,361,167	14,234,371	10,107,456	4,732,433	6,455	188,235,548
1924	78,861,693	63,914,412	26,076,079	14,310,376	10,748,734	4,831,856	7,625	198,750,775
1925	77,993,259	63,181,481	26,738,792	13,623,369	11,216,634	4,688,567	8,800	197,450,902

(iii) *Proportion of Advances to Deposits.* The percentage of advances on total deposits shows to what extent the needs of one State are supplied by the resources of another State, and, where the percentage for Australia as a whole exceeds 100 (as it did in the early years of the century), the banks must have supplied the deficiency from their own resources, or from deposits obtained outside Australia. The following figures show, however, that the banking business of Australia has been self-contained in every State, except Western Australia, during the period under review :—

JOINT STOCK BANKS.—PERCENTAGE OF ADVANCES ON DEPOSITS, 1921 TO 1925.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	All States.
	%	%	%	%	%	%	%	%
1921 ..	85.24	73.73	84.99	67.41	111.31	80.10	9.95	80.59
1922 ..	77.88	69.44	79.43	66.20	112.29	84.73	6.87	75.60
1923 ..	79.44	71.72	82.14	77.00	110.04	88.73	3.63	78.16
1924 ..	87.11	75.82	87.95	71.25	116.37	85.35	4.07	82.93
1925 ..	78.93	73.75	85.51	67.38	122.39	89.32	4.35	78.79

7. Commonwealth Bank of Australia.—(i) *Liabilities, June Quarter, 1925.*—On account of the magnitude of the Savings Bank business of this bank, the figures have been separated from those of the Joint Stock banks, and are shown hereunder. The total deposits amounted to £71,008,612, of which Savings Bank deposits accounted for £39,798,481 or 56 per cent.

COMMONWEALTH BANK OF AUSTRALIA.—LIABILITIES, JUNE QUARTER, 1925.

States and Territory.	Bills in Circulation.	Balances Due to Other Banks.	Deposits.				Total Liabilities.
			Not Bearing Interest.	Bearing Interest.	Savings Bank Deposits.	Total Deposits.	
	£	£	£	£	£	£	£
New South Wales	84,763	1,761,692	9,224,775	1,227,876	8,123,194	18,575,845	20,422,300
Victoria ..	103,349	1,058,922	3,275,551	2,680,799	5,320,159	11,276,509	12,438,780
Queensland ..	50,953	545,264	6,938,005	2,258,756	20,375,244	29,572,005	30,168,222
South Australia	11,554	185,755	1,817,258	858,623	2,260,390	4,936,271	5,133,580
Western Australia	11,728	245,924	1,634,549	499,698	2,225,799	4,360,046	4,617,698
Tasmania ..	3,589	142,465	491,343	302,833	1,464,016	2,258,192	2,404,246
Northern Territory	..	..	..	65	29,679	29,744	29,744
Total ..	265,936	3,940,022	23,381,481	7,828,650	39,798,481	71,008,612	75,214,570

(ii) *Liabilities, all States, June Quarters, 1921 to 1925.*—The average liabilities in the years specified are given in the table below.

COMMONWEALTH BANK OF AUSTRALIA.—LIABILITIES, JUNE QUARTERS, 1921 TO 1925.

Quarter ended 30th June—	Bills in Circulation.	Balances Due to Other Banks.	Deposits.				Total Liabilities.
			Not Bearing Interest.	Bearing Interest.	Savings Bank Deposits.	Total Deposits.	
	£	£	£	£	£	£	£
1921	184,115	143,045	15,966,670	10,608,164	34,440,421	61,015,255	61,342,415
1922	167,590	104,466	19,236,693	10,812,159	36,137,065	66,185,917	66,457,973
1923	204,576	29,849	17,718,999	14,658,671	38,102,850	70,480,520	70,714,945
1924	212,362	29,061	23,004,674	6,899,902	38,273,478	68,178,054	68,419,477
1925	265,936	3,940,022	23,381,481	7,828,650	39,798,481	71,008,612	75,214,570

(iii) *Assets, June Quarter, 1925.* The assets for the June Quarter, 1925, are as follows :—

COMMONWEALTH BANK OF AUSTRALIA.—ASSETS, JUNE QUARTER, 1925.

States and Territory.	Coin.	Bullion.	Government and Municipal Securities.	Landed and House Property.	Notes and Bills of Other Banks.	Balances Due from Other Banks.	Discounts, Overdrafts, and all other Assets (not including Contingent Assets).	Australian Notes.	Total Assets.
	£	£	£	£	£	£	£	£	£
N.S.W. ..	1,954,445	..	12,346,746	312,000	222,249	1,878,799	4,992,982	4,486,248	26,193,469
Victoria ..	1,625,442	..	3,965,538	405,867	167,892	577,647	2,002,659	3,231,260	11,976,305
Queensland ..	373,242	65	18,466,170	110,386	296,571	244,424	3,783,941	3,873,581	27,148,380
S. Australia ..	99,125	..	1,365,266	96,370	120,955	400,476	296,882	1,336,351	3,715,425
W. Australia ..	598,906	2,186	725,792	19,001	97,118	116,521	551,133	718,481	2,829,138
Tasmania ..	24,505	..	1,941,748	..	30,245	63,319	322,468	354,666	2,736,951
Nor. Ter. ..	..	..	..	..	45,000	49,507	273	..	94,780
Total ..	4,675,665	2,251	38,811,260	943,624	980,030	3,330,693	11,950,338	14,000,587	74,694,448

(iv) *Assets, all States, June Quarters, 1921 to 1925.*—The great increase in Australian Notes is due in part to the obligation imposed by the Commonwealth Bank Act, 1924, on the Joint Stock banks of settling their exchanges through the Commonwealth Bank.

COMMONWEALTH BANK OF AUSTRALIA.—ASSETS, JUNE QUARTERS, 1921 TO 1925.

Quarter ended 30th June—	Coin.	Bullion.	Government and Municipal Securities.	Landed and House Property.	Notes and Bills of Other Banks.	Balances Due from Other Banks.	Discounts, Overdrafts, and all other Assets (not including Contingent Assets).	Australian Notes.	Total Assets.
	£	£	£	£	£	£	£	£	£
1921	1,846,976	10,580	33,640,763	624,186	939,500	3,350,321	14,896,625	4,922,840	60,231,791
1922	2,339,719	10,151	34,760,870	599,960	3,487,074	3,488,840	14,130,747	4,730,493	63,547,854
1923	2,637,450	9,397	37,479,846	762,730	5,138,747	2,772,000	14,035,767	3,750,438	66,586,375
1924	2,100,874	6,683	39,537,851	917,413	966,787	4,872,321	11,999,432	9,084,343	69,485,704
1925	4,675,665	2,251	38,811,260	943,624	980,030	3,330,693	11,950,338	14,000,587	74,694,448

8. **Clearing Houses.**—The Sydney Banks' Exchange Settlement, and the Melbourne Clearing House, at which settlements are effected daily between the banks doing business in New South Wales and Victoria respectively, publish figures of the weekly clearances effected. From these it appears that in 1925 the total clearances in Sydney amounted to £909,000,000, and in Melbourne to £803,000,000. Owing to the different distribution of the banking business in the two cities, the figures do not necessarily afford a fair comparison of the volume of banking business transacted in Sydney and Melbourne. Returns of all Australian Clearing Houses for the last five years are shown in the following table :—

CHEQUE-PAYING BANKS.—CLEARING HOUSE RETURNS, 1921 TO 1925.

Year.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.
	£	£	£	£	£	£
1921	709,734,000	609,355,000	157,549,000	157,503,000	67,619,000	..
1922	726,583,000	623,789,000	172,836,000	147,374,000	75,279,000	..
1923	805,032,000	697,050,000	194,915,000	160,524,000	83,730,000	..
1924	845,855,000	734,080,000	179,335,000	212,220,000	97,920,000	..
1925	909,114,000	803,083,000	192,968,000	171,092,000	101,085,000	25,557,000

§ 3. Savings Banks.

1. **General.**—In the following tables dealing with Savings Banks the figures for all the States except Tasmania refer to financial years ended 30th June. In the case of Tasmania, figures for the two trustee savings banks are made up to the last day of August. The figures in each State are inclusive of the Savings Bank Department of the Commonwealth Bank made up to the 30th June.

2. **Accounts Open.**—The number of accounts open, not of those making deposits, and the number per 1,000 of the population, at 30th June in each of the last five years are shown in the following table :—

SAVINGS BANKS.—ACCOUNTS OPEN, 1921 TO 1925.

30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	All States.
				NUMBER.				
1921 ..	1,126,157	1,072,554	327,065	396,970	217,136	115,502	935	3,256,319
1922 ..	1,186,948	1,127,892	337,621	414,570	225,136	120,252	861	3,413,280
1923 ..	1,246,191	1,188,437	355,902	432,438	250,214	124,850	869	3,598,901
1924 ..	1,306,948	1,268,629	375,025	452,342	264,842	130,032	844	3,798,662
1925 ..	1,374,976	1,337,093	397,710	470,599	278,071	132,841	911	3,992,201
				PER 1,000 OF POPULATION.				
1921 ..	535	698	426	798	651	545	238	597
1922 ..	552	718	431	821	662	564	235	613
1923 ..	568	739	442	836	719	583	238	633
1924 ..	586	774	453	855	735	610	233	655
1925 ..	604	800	465	866	756	627	242	673

In connexion with the number of accounts open per 1,000 of the population, it must be borne in mind that savings bank accounts are not restricted to adults, since many accounts are opened in the names of children. The proportion, notwithstanding, is a very large one, amounting in the case of Australia to two-thirds, and rising in Victoria to four-fifths and in South Australia to six-sevenths of the population. As it is possible in some States for the same person to have accounts in both Commonwealth and State Savings Banks, the figures given are somewhat in excess of the number of individual depositors. Allowance must also be made for the fact that the funds of various societies, small trust funds, etc., are sometimes deposited in Savings Banks.

3. **Deposits.**—The deposits in Australia reached in 1925 the large sum of £183,035,774, and would no doubt be even larger if the banks did not restrict interest-bearing deposits to certain limits. While not granting facilities to draw cheques, the Australian savings banks practically afford the small tradesman all the advantages of a current account, and in addition allow interest on the minimum monthly balance instead of charging a small fee for keeping the account, as is the practice of the ordinary banks. All the Savings Banks have a reciprocity arrangement, under which money deposited in one State may be drawn out in another State, even by telegraph.

The table below shows the amount at credit of depositors, the average per account open, and the average amount deposited for head of population at the end of each of the last five years :—

SAVINGS BANKS.—DEPOSITS, 1921 TO 1925.

30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	All States.
				TOTAL.				
	£	£	£	£	£	£	£	£
1921	57,394,441	48,970,989	18,587,942	16,317,353	7,663,440	4,159,502	53,790	153,147,457
1922	61,791,273	52,131,032	19,394,156	16,931,678	7,759,317	4,224,662	41,115	162,273,233
1923	64,324,670	56,101,260	20,483,581	18,249,540	8,033,419	4,414,653	36,689	171,643,812
1924	66,162,055	58,028,190	20,410,364	19,351,127	8,218,147	4,670,804	30,790	176,871,477
1925	69,149,433	59,551,895	21,339,901	20,152,175	8,303,933	4,505,476	32,961	183,035,774
				AVERAGE PER SAVINGS BANK ACCOUNT.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1921	50 19 4	45 13 2	56 16 8	41 2 1	35 5 10	36 0 3	57 10 7	47 0 7
1922	52 1 2	46 4 5	57 8 10	40 16 10	34 9 4	35 2 7	47 15 1	47 10 10
1923	51 12 4	47 4 1	57 11 1	42 4 0	32 2 1	35 7 2	41 5 5	47 13 10
1924	50 12 6	45 14 10	54 8 6	42 15 7	31 0 7	35 18 5	36 9 7	46 11 3
1925	50 5 10	44 10 9	53 13 2	42 16 5	29 17 3	33 18 4	36 3 8	45 16 11
				PER HEAD OF POPULATION.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1921	27 5 5	31 17 10	24 4 6	32 16 2	22 19 5	19 12 8	13 14 1	28 1 7
1922	28 14 7	33 3 11	24 15 0	33 10 9	22 16 4	19 16 1	11 4 8	29 3 0
1923	29 6 9	34 17 11	25 8 6	35 6 5	23 1 6	20 13 0	10 1 2	30 3 6
1924	29 13 4	35 7 9	24 13 3	36 11 10	22 16 1	21 18 2	8 9 10	30 9 6
1925	30 7 7	35 12 10	24 19 1	37 2 1	22 11 3	21 5 3	8 15 0	30 17 5

A comparison of the number of accounts open and the amount of deposits shows that the average amounts to the credit of each account are considerably larger in some States than in others ; in other words, in one State a comparatively larger proportion of the population makes use of the savings banks than in another, with the result that there is a smaller amount to the credit of the individual account. Within the same State there is little variation in the figures from year to year, except that each State generally shows a steady advance.

The average amount deposited per head of population increased during the period by 10 per cent., the figures for Victoria and South Australia being particularly noticeable.

4. **Rates of Interest.**—The rates of interest allowed, and the limits of interest-bearing deposits, are as follows :—New South Wales, Government Savings Bank, 4 per cent. up to £500 and 3½ per cent. on the excess up to £1,000 ; Victoria, 4 per cent. on first £500 and then 3 per cent. for a further £500, also 4 per cent. on deposit stock up to £1,000 ; South Australia 3½ per cent, on accounts closed during the year, and 4½ per cent. up to £500 on accounts remaining open ; Western Australia, 3½ per cent. from £1 to £1,000 ; also 4 per cent. on deposit stock up to £1,000 ; Hobart Trustees' Savings Bank, 4½ per cent. up to £300 ; Launceston Trustees' Savings Bank, 4½ per cent. up to £150, and Commonwealth Savings Bank, 3½ per cent. on the first £1,000, and 3 per cent. upon another £300.

5. **Annual Business.**—The business transacted by the savings banks is very large when compared with the total amount of deposits. This is of course due to the fact that many accounts are used as convenient current accounts. Thus, during the last year of the period under review, the total amount deposited and withdrawn (exclusive of interest added) was almost double the total amount of deposits at the end of the previous year, while the amount at credit of depositors (inclusive of interest added) increased 3 per

cent. during the same year. Withdrawals, however, exceeded actual deposits by more than £200,000. The following table shows the business transacted during the year 1924–25 :—

SAVINGS BANKS.—TRANSACTIONS, 1924–25.

State.	Total Deposits at end of Year 1923–24.	Amounts Deposited during Year 1924–25.	Interest Added during Year 1924–25.	Total.	Amounts Withdrawn during Year 1924–25.	Total Deposits at end of Year 1924–25.
	£	£	£	£	£	£
New South Wales ..	66,162,055	67,573,577	2,387,636	136,123,268	66,973,835	69,149,433
Victoria	58,028,190	54,258,481	2,072,297	114,358,968	54,807,073	59,551,895
Queensland.. ..	20,410,364	22,559,506	671,331	43,641,201	22,301,300	21,339,901
South Australia ..	19,351,127	16,499,290	828,580	36,678,997	16,526,822	20,152,175
Western Australia ..	8,218,147	7,732,405	266,896	16,217,448	7,913,515	8,303,933
Tasmania	4,670,804	3,666,991	170,862	8,508,657	4,003,181	4,505,476
Northern Territory ..	30,790	25,709	990	57,489	24,528	32,961
Total ..	176,871,477	172,315,959	6,398,592	355,586,028	172,550,254	183,035,774

6. **Commonwealth Savings Bank.**—The figures in the preceding tables include those relating to the Savings Bank Department of the Commonwealth Bank, which commenced operations in Victoria on the 15th July, 1912, in Queensland on the 16th September, 1912, in the Northern Territory on the 21st October, 1912, and in the States of New South Wales, South Australia, and Western Australia on the 13th January, 1913. Extensive use is made of the country post-offices as local agencies.

The Commonwealth Bank absorbed the Tasmanian State Savings Bank in January, 1913, on terms set out in Official Year Book No. 6. The transfer of the Queensland Savings Bank was effected in 1920.

The following table gives the number of accounts, and the amount at credit on 30th June, 1925, at the various branches of the Commonwealth Savings Bank :—

COMMONWEALTH SAVINGS BANK, 30th JUNE, 1925.

Locality.	Number of Accounts.	Amount at Credit.
		£
New South Wales	281,292	8,602,647
Victoria	152,880	5,563,241
Queensland	397,710	21,339,901
South Australia	56,011	2,367,554
Western Australia	72,739	2,332,647
Tasmania	61,737	1,520,693
Northern Territory	911	32,961
Papua and New Guinea	1,789	69,753
London	7,413	483,689
Total	1,032,482	42,313,086

A series of graphs illustrating the progress of banking accompanies this chapter.

§ 4. Companies.

1. **General.**—Returns in regard to registered companies are defective, and, with few exceptions, are not available for Tasmania. They embrace (*a*) Returns relating to Trustees, Executors and Agency Companies ; (*b*) Returns relating to Registered Building and Investment Societies ; and (*c*) Returns relating to Registered Co-operative Societies.

2. **Trustees, Executors and Agency Companies.**—Returns are available for eight Victorian, two New South Wales, one Queensland, four South Australian, two Western Australian, and three Tasmanian companies. The paid-up capital of these twenty companies amounted to £1,090,484 ; reserve funds and undivided profits to £683,717 ; other liabilities, £273,292 ; total liabilities, £2,047,493. Among the assets are included—Deposits with Governments, £197,504 ; other investments in public securities, fixed deposits, etc., £561,806 ; loans on mortgage, £236,777 ; property owned, £712,908 ;

other assets, £338,498. Of the twenty companies, nine show the total amount of the estates, etc., under administration, the total for 1925 being over £80,500,000. Net profits for the year totalled £181,928, of which £117,804 was paid in dividends.

3. **Registered Building and Investment Societies.**—(i) *General.* Returns have been received relating to 87 societies, viz., 7 in New South Wales, 27 in Victoria, 12 in Queensland, 22 in South Australia, 15 in Western Australia, and 4 in Tasmania. The information is not exhaustive, as particulars regarding unimportant organizations are not included.

REGISTERED BUILDING AND INVESTMENT SOCIETIES.—SUMMARY, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*e*)	Tasmania.	All States.
Number of societies ..	7	27	12	22	15	4	87
Number of shareholders ..	(*a*)	9,707	5,455	15,844	8,139	3,662	*b*42,807
Number of shares ..	(*a*)	(*a*)	1,055,147	53,867	26,503	29,537	*c*1,165,054
Number of borrowers ..	(*a*)	9,936	3,096	2,656	1,601	1,300	*b*18,589
Income for year from interest .. £	113,280	294,921	53,672	28,348	(*d*)	35,555	525,776
Working expenses for year £	106,171	122,521	8,547	13,711	20,479	13,458	284,887
Amount of deposits during year .. .. £	(*a*)	1,355,493	120,654	22,253	159,710	30,711	*b*1,688,821
Repayment of loans during year .. .. £	(*a*)	921,176	160,617	121,443	93,922	92,063	*b*1,389,221
Loans granted during year £	(*a*)	1,022,272	174,811	159,706	148,347	93,664	*b*1,598,800

(*a*) Not available. (*b*) Exclusive of New South Wales. (*c*) Exclusive of New South Wales and Victoria. (*d*) Included in repayment of Loans. (*e*) For eighteen months ended 30th June, 1925.

(ii) *Liabilities.* The balance-sheets cover various periods ended during the second half of 1924 and the first half of 1925, so that the returns may be assumed to correspond roughly to the financial year 1924–25.

REGISTERED BUILDING AND INVESTMENT SOCIETIES.—LIABILITIES, 1924–25.

State.	Paid-up Capital or Subscriptions.	Reserve Funds.	Deposits.	Bank Overdrafts and other Liabilities.	Total Liabilities.
	£	£	£	£	£
New South Wales ..	401,277	269,571	550,116	19,069	1,240,033
Victoria	1,623,680	536,970	1,289,191	310,674	3,760,515
Queensland ..	725,842	32,221	7,010	29,320	794,393
South Australia ..	463,165	69,993	15,938	25,974	575,070
Western Australia (*a*)	291,343	14,071	76,020	57,850	439,284
Tasmania	181,255	78,840	212,088	9,683	481,866
Total ..	3,686,562	1,001,666	2,150,363	452,570	7,291,161

(*a*) For eighteen months ended 30th June, 1925.

(iii) *Assets.* The assets of the companies for the same period were as follows :—

REGISTERED BUILDING AND INVESTMENT SOCIETIES.—ASSETS, 1924–25.

State.	Advances on Mortgage.	Landed and House Property, Furniture, etc.	Cash in hand and on Deposit and other Assets.	Total Assets.
	£	£	£	£
New South Wales	1,080,494	(*a*)	159,539	1,240,033
Victoria	3,552,523	112,980	95,012	3,760,515
Queensland	751,632	7,175	35,586	794,393
South Australia	529,754	20,328	24,988	575,070
Western Australia (*b*)	423,110	267	15,907	439,284
Tasmania	437,557	10,390	33,919	481,866
Total	6,775,070	151,140	364,951	7,291,161

(*a*) Included with other assets. (*b*) For eighteen months ended 30th June, 1925.

4. Co-operative Societies.—(i) *General.* The returns relating to Co-operative Societies have been divided into two classes—(i) those engaged in the manufacture and marketing of primary products and trade requirements, and (ii) those engaged in retailing general household requirements. The former may be described briefly as Producers' Co-operative and the latter as Consumers' Co-operative Societies. The following table shows the number of societies, the membership, and the capital employed for the year 1924 :—

CO-OPERATIVE SOCIETIES.—NUMBER, MEMBERSHIP AND CAPITAL, 1924.

Heading.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
Producers' Co-operative Societies—							
Number of Societies	52	55	26	20	17	10	180
Membership ..	39,050	50,860	21,844	19,027	1,748	4,760	137,289
Loan Capital £	417,118	969,184	194,223	107,693	20,013	109,564	1,817,795
Share Capital £	726,535	1,172,249	330,902	606,319	24,281	61,988	2,922,274
Total Capital £	1,143,653	2,141,433	525,125	714,012	44,294	171,552	4,740,069
Consumers' Co-operative Societies—							
Number of Societies ..	29	27	7	11	40	4	118
Membership ..	34,380	9,654	3,161	32,317	5,858	746	86,116
Loan Capital £	33,299	167,266	25,030	176,066	33,577	13,733	448,971
Share Capital £	476,619	147,688	40,044	585,854	72,010	17,332	1,339,547
Total Capital £	509,918	314,954	65,074	761,920	105,587	31,065	1,788,518
All Societies—							
Number of Societies ..	81	82	33	31	57	14	298
Membership ..	73,430	60,514	25,005	51,344	7,606	5,506	223,405
Loan Capital £	450,417	1,136,450	219,253	283,759	53,590	123,297	2,266,766
Share Capital £	1,203,154	1,319,937	370,946	1,192,173	96,291	79,320	4,261,821
Total Capital £	1,653,571	2,456,387	590,199	1,475,932	149,881	202,617	6,528,587

(ii) *Sales, Profits, Interest, and Dividends paid.* The next table gives the total sales, net profits, interest paid on loan capital, and dividends on share capital.

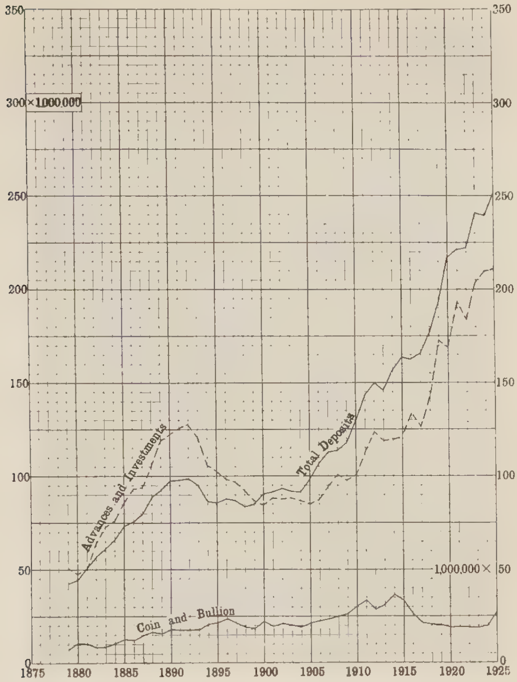
The profits made by Consumers' Co-operative Societies, after payment of interest on loan and share capital, are distributed as dividends on the amount of purchases made by members.

CO-OPERATIVE SOCIETIES.—SALES, PROFITS, INTEREST, AND DIVIDENDS, 1924.

Heading.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
Producers' Co-operative Societies—							
Total Sales .. £	14,966,287	11,277,168	2,663,539	3,941,454	280,558	156,434	33,285,440
Total Net Profits £	142,352	79,497	30,718	27,454	16,584	(−) 589	296,016
Interest on Loan Capital—							
Amount .. £	18,512	54,379	8,320	3,258	1,205	4,305	89,979
Rate per Cent. ..	7.0	6.5	6.5	6.5	7.7	5.8	6.7
Dividend on Share Capital—							
Amount .. £	44,194	22,816	5,156	1,499	1,865	141	75,671
Rate per Cent. ..	6.1	1.9	1.6	0.2	7.5	0.2	2.9
Consumers' Co-operative Societies—							
Total Sales .. £	2,197,196	927,442	241,658	1,847,960	425,034	117,855	5,757,145
Total Net Profits £	184,269	31,342	6,907	86,166	21,335	3,873	333,892
Interest on Loan Capital—							
Amount .. £	1,122	7,472	1,412	11,175	2,096	1,166	24,443
Rate per Cent. ..	6.3	6.7	6.0	5.7	6.5	6.9	6.4
Interest on Share Capital—							
Amount .. £	10,642	7,827	1,247	25,585	2,579	573	48,453
Rate per Cent. ..	2.2	5.3	3.1	4.4	3.6	3.3	3.6
Dividends on Purchases ..	170,664	12,796	4,638	46,375	5,883	2,032	242,388
Rate in the £1	1s. 7d.	0s. 3d.	0s. 5d.	0s. 6d.	0s. 3d.	0s. 4d.	0s. 10d.

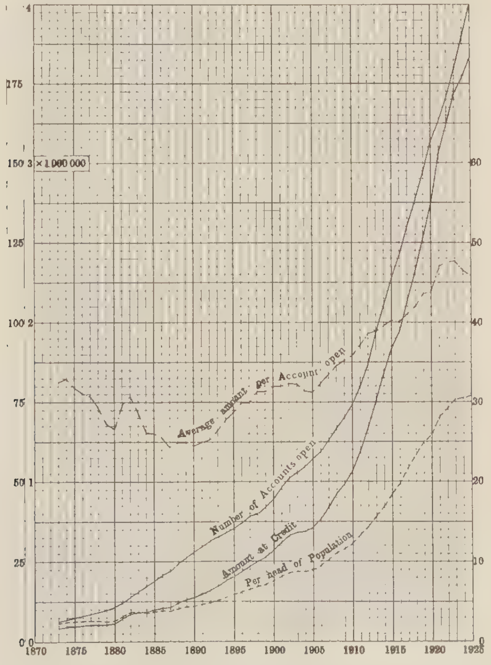
(−) indicates a loss.

CHEQUE-PAYING BANKS, AUSTRALIA, 1879 TO 1925



EXPLANATION.—The base of each small square represents an interval of one year, and its vertical height a sum of £5,000,000.

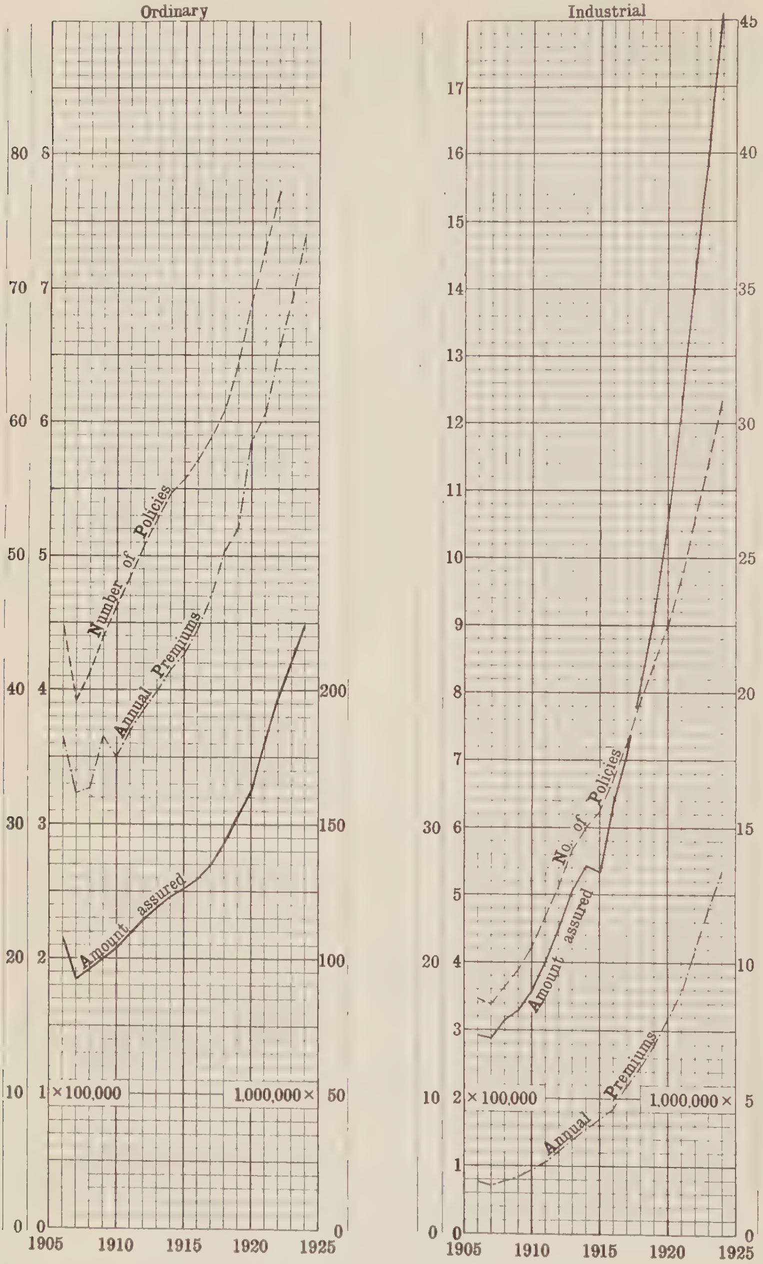
SAVINGS BANKS, AUSTRALIA, 1873 TO 1925.



EXPLANATION.—The base of each small square represents an interval of one year. Of the two scales on the left, the outer one shows the amount at credit, and the inner one the number of depositors, while the vertical height of each small square represents £2,500,000, and 50,000 in number. The scale on the right shows the average amount per depositor, and per head of population, while the vertical height of each small square represents £1.

†

LIFE ASSURANCE, ORDINARY AND INDUSTRIAL DEPARTMENTS.—AUSTRALIA, 1906 TO 1925.



EXPLANATION.—The base of each small square represents in each graph an interval of one year.

In the case of the "Ordinary" Assurance graph there are three scales—two on the left—the outer one representing the Annual Premiums, and the inner one the number of Policies in force,—and one on the right representing the Amount Assured, exclusive of bonus additions. The vertical height of each small square represents £100,000 premium, 10,000 in number and £5,000,000 in sum assured.

In the case of the "Industrial" graph, the outer scale on the left represents the Annual Premiums, and the inner scale the number of Policies in force. The scale on the right represents the Amount Assured, exclusive of bonus additions. The vertical height of each small square represents £100,000 premium, 20,000 in number, and £500,000 in sum assured.

§ 5. Life Assurance.

[NOTE.—A Conspectus of Australian Life Assurance Legislation was published in Official Year Book No. 18, 1925, in Chap. XXVII. "Miscellaneous."]

1. **General.**—Under section 51 of the Commonwealth Constitution Act, the Commonwealth Parliament is empowered to legislate in regard to "insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned." With the exception of Act No. 12 of 1905, "An Act relating to assurance on the lives of children by life assurance companies or societies," no legislation relating to life assurance has been passed by the Commonwealth Parliament, and life assurance companies carry on their business under State laws where such laws are in existence, or otherwise under the provisions of various companies or special Acts.

Returns for the year 1924 have been collected from life assurance societies, with results which are in the main satisfactory. The figures below refer to Australian business only.

2. **Companies Transacting Business.**—(i) *General.* The number of companies transacting life assurance business in Australia during 1924 was 35, of which the full name and location of head office are set out in the table below.

LIFE ASSURANCE SOCIETIES OPERATING IN AUSTRALIA, 1924.

Full Name of Company or Society.	Head Office.	Business Transacted.
Australian Mutual Provident Society	Sydney	Ord. Ind.
Mutual Life and Citizens' Assurance Company Limited	,,	,,
City Mutual Life Assurance Society Limited	,,	Ord.
Australian Metropolitan Life Assurance Company Limited	,,	Ord. Ind.
People's Prudential Assurance Company Limited	,,	,,
Assurance and Thrift Association Limited	,,	Ord.
Australian Provincial Assurance Association Limited	,,	,,
Commonwealth General Assurance Corporation Limited	,,	Ord. Ind.
Commonwealth Life Assurance Society Limited	,,	,,
Australian Benefit Life Assurance Society Limited	,,	Ord.
Farmers' and General Assurance Corporation Limited	,,	,,
Producers' and Citizens' Co-operative Assurance Company of Australia Limited	,,	Ord. Ind.
Australian Natives' Association Limited	,,	,,
Australasian Catholic Assurance Company Limited	,,	,,
Australian Federal Life and General Assurance Company Limited	,,	Ord.
Empire Life and General Assurance Company Limited	,,	,,
Citizens' and Graziers' Life Assurance Company Limited	,,	Ord. Ind.
Australian Group and General Assurance Company Limited	,,	,,
Colonial Provident Life and General Assurance Company Limited	,,	Ord.
Australian Alliance Assurance Company Limited	Melbourne	,,
National Mutual Life Association of Australasia Limited	,,	,,
Victoria Life and General Insurance Company	,,	,,
Colonial Mutual Life Assurance Society Limited	,,	Ord. Ind.
Australasian Temperance and General Mutual Life Assurance Society Limited	,,	,,
Life Insurance Company	,,	Ord.
Southern Cross Assurance Company Limited	,,	,,
New Era Insurance Company of Australasia Limited	,,	,,
Queensland State Insurance Office	Brisbane	,,
Equitable Life Assurance Company of Queensland Limited	,,	,,
Queensland Probate Insurance Company Limited	,,	,,
Western Australian Insurance Company Limited	Perth	,,
Provident Life Assurance Company	Dunedin	Ord. Ind.
Liverpool and London and Globe Insurance Company	Liverpool	Ord.
Mutual Life Insurance Society of New York	New York	,,
New York Life Insurance Society	,,	,,

Of the Australian companies seven are purely mutual, and twenty-three are proprietary companies with a paid-up capital aggregating £1,469,795, part of which is, however, used in fire, marine, and accident insurance business. One office is a State government institution. Four oversea companies transacted business in Australia in 1924, two being mutual and two proprietary companies.

(ii) *Ordinary and Industrial Business.* Of the societies enumerated in the preceding paragraph, fifteen transacted both ordinary and industrial business. Ordinary and industrial business have, where possible, been kept separate, while figures relating to companies whose head offices are in New Zealand or in Europe or America have been restricted to the Australian business.

3. Australian Business, 1924.—(i) *Ordinary.* The subjoined table shows the ordinary life business in force for each of the last five years. While the total sum assured has increased by almost 56 million pounds, the average per policy has increased from £243 to £273. The amount assured in 1924 represents an average of £39 per head of population.

ORDINARY LIFE ASSURANCE.—AUSTRALIAN BUSINESS, 1920 TO 1924.

Year.	Policies.	Amount.	Average per Policy.	Annual Premium Income.
	No.	£	£	£
1920	692,160	168,255,272	243	5,871,894
1921	730,010	180,694,068	248	6,074,375
1922	769,893	196,844,810	256	6,526,907
1923	795,887	210,049,945	264	6,925,581
1924	820,138	224,129,981	273	7,388,353

(ii) *Industrial.* Information in regard to the industrial business of the fourteen societies transacting it is given in the following table.

The amount assured has increased by nearly 73 per cent. in the period under review. The average amount per policy in 1924 was £37, comparing with an average of £29 in 1920.

INDUSTRIAL LIFE INSURANCE.—AUSTRALIAN BUSINESS, 1920 TO 1924.

Year.	Policies.	Amount.	Average per Policy.	Annual Premium Income.
	No.	£	£	£
1920	904,346	26,223,335	29	1,586,313
1921	973,019	30,314,759	31	1,789,846
1922	1,061,569	35,303,233	33	2,087,148
1923	1,144,004	40,009,115	35	2,387,187
1924	1,233,925	45,256,580	37	2,681,774

4. Receipts and Expenditure.—(i) *Ordinary Business.* The following table shows the aggregate Australian revenue for 1922, 1923, and 1924 of all the societies doing business in Australia. In the latter year premiums—new and renewal—amounted to 61 per cent., and interest, dividends, and rent to nearly 37 per cent. of the Australian revenue.

ORDINARY LIFE ASSURANCE.—AUSTRALIAN RECEIPTS, 1922 TO 1924.

Heading.	Amount. 1922.	1923.	1924.
	£	£	£
Premiums—New	925,146	976,682	991,367
Renewal	5,601,761	5,948,899	6,396,986
Consideration for annuities	76,993	48,191	78,434
Interest, dividends, and rents	3,762,410	4,078,407	4,488,989
Other receipts	152,247	218,961	208,350
Total Income	10,518,557	11,271,140	12,164,126

In 1924 expenditure amounted to £7,211,583, of which claims accounted for nearly 57 per cent., surrenders over 11 per cent., expenses of management over 11 per cent., and commission 9 per cent.

ORDINARY LIFE ASSURANCE.—AUSTRALIAN EXPENDITURE, 1922 TO 1924.

Heading.	Amount. 1922.	1923.	1924.
	£	£	£
Claims	3,796,599	3,926,371	4,079,237
Surrenders	689,869	838,066	819,874
Annuities	93,273	95,550	101,880
Commission	544,686	611,914	637,833
Expenses of management	788,391	817,508	817,119
Licence fees and taxes	101,310	113,302	128,922
Shareholders' dividends	49,279	58,037	83,515
Cash bonuses paid to shareholders ..	311,394	309,429	338,120
All other expenses	325,667	387,849	205,083
Total expenditure ..	6,700,468	7,158,026	7,211,583

A summary for the last five years is given hereunder :—

ORDINARY LIFE ASSURANCE.—AUSTRALIAN RECEIPTS AND EXPENDITURE, 1920 TO 1924.

Year.	Receipts.	Expenditure.	Excess Receipts.
	£	£	£
1920	9,037,314	5,330,050	3,707,264
1921	9,599,866	5,813,414	3,786,452
1922	10,518,557	6,700,468	3,818,089
1923	11,271,140	7,158,026	4,113,114
1924	12,164,126	7,211,583	4,952,543

(ii) *Industrial Business* The aggregate Australian revenue for 1922, 1923, and 1924 of societies transacting industrial business was as follows :—

INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN RECEIPTS, 1922 TO 1924.

Heading.	Amount. 1922.	1923.	1924.
	£	£	£
Premiums—New and renewal	2,087,148	2,387,187	2,681,774
Consideration for annuities	23	268	13
Interest, dividends, and rents	399,477	512,644	598,335
Other receipts	18,143	20,584	19,847
Total income	2,504,791	2,920,683	3,299,969

Expenditure during 1924 totalled £1,864,553. Claims amounted to £601,908, or 32 per cent., commission 37 per cent., and expenses of management nearly 20 per cent.

INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN EXPENDITURE, 1922 TO 1924.

Heading.	Amount.		
	1922.	1923.	1924.
	£	£	£
Claims	425,359	514,156	601,908
Surrenders	34,103	50,846	71,627
Annuities	295	295	295
Commission	505,716	589,029	692,975
Expenses of management	240,867	321,692	355,350
Licence fees and taxes	15,693	17,297	20,777
Shareholders' dividends	57,421	56,809	54,766
Cash bonuses paid to shareholders ..	..	13	26
All other expenses	76,358	87,509	66,829
Total expenditure ..	1,355,812	1,637,646	1,864,553

The aggregate receipts and expenditure for the last five years were as follows :—

INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN RECEIPTS AND EXPENDITURE, 1920 TO 1924.

Year.	Receipts.	Expenditure.	Excess Receipts.
	£	£	£
1920	1,929,717	1,060,622	869,095
1921	2,223,319	1,122,920	1,100,399
1922	2,504,791	1,355,812	1,148,979
1923	2,920,683	1,637,646	1,283,037
1924	3,299,969	1,864,553	1,435,416

5. Liabilities and Assets, 1924.—(i) *General.* The liabilities of the Australian societies consist mainly of their assurance funds ; as already mentioned, however, some of the societies are proprietary, and in these cases there is a further liability on account of the shareholders' capital. The assets consist chiefly of loans on mortgage and policies, Government, municipal, and similar securities, shares, freehold property, etc. As in some cases the Australian liabilities exceed the Australian assets, this table should be read in connexion with the table dealing with assets. Loans on personal security are granted by very few of the Australian societies.

(ii) *Ordinary and Industrial Business.* For various reasons several societies do not attempt the division of liabilities and assets between the industrial and ordinary branches, and a few societies cannot state the amount of liabilities in Australia. In the following table, therefore, the figures relate to both branches. Australian liabilities amounted in 1924 to £68,775,041, including assurance and annuity funds, £60,022,243, other funds, including those used in fire and marine business, £5,069,632, and paid-up capital, £1,469,795.

Australian assets aggregated £95,459,697, of which the following are the principal items :—Government and municipal securities, £52,967,836 ; mortgages, £21,066,410 ; loans on companies' policies, £9,156,489 ; and landed and house property, £3,472,159. Details regarding liabilities for the years 1922, 1923, and 1924 are given in the next table :—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN LIABILITIES, 1922 TO 1924.

Heading.	Amount.		
	1922.	1923.	1924.
	£	£	£
Shareholders' capital, paid up	1,122,109	1,307,877	1,469,795
Assurance and annuity funds	52,098,875	56,480,692	60,022,243
Other funds	3,923,512	4,380,967	5,069,632
Claims admitted but not paid	695,348	632,116	695,404
All other liabilities	1,637,333	1,299,212	1,517,967
Total Australian liabilities (*a*) ..	59,477,177	64,100,864	68,775,041

(*a*) Excluding Mutual Life and Citizens, Australian Provincial, National Mutual, Western Australian, London and Liverpool and Globe, Mutual Life of United States, and New York Life.

Assets for the years specified are set out in detail in the table hereunder :—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN ASSETS, 1922 TO 1924.

Heading.	Amount.		
	1922.	1923.	1924.
	£	£	£
Government and municipal securities ..	46,488,751	49,261,981	52,967,836
Mortgages	17,603,444	19,546,248	21,066,410
Loans on companies' policies	7,492,847	8,138,547	9,156,489
Railway debentures and stock	423,102	504,548	812,998
Landed and house property	3,168,158	3,576,368	3,472,159
Life interests and reversions	124,885	131,565	138,730
Other investments	1,465,865	1,209,171	1,474,049
Outstanding premiums	619,349	714,157	742,614
Outstanding interest, dividends, and rents ..	730,409	783,755	861,471
Cash	1,223,727	1,256,994	2,357,630
Establishment and organization accounts ..	442,276	693,484	796,095
All other assets	1,191,122	2,282,198	1,613,216
Total Australian assets ..	80,973,935	88,099,016	95,459,697

The next table gives the Australian liabilities and assets for the latest five years available :—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN LIABILITIES AND ASSETS, 1920 TO 1924.

Year.	Liabilities.(*a*)	Assets.
	£	£
1920	49,489,851	71,768,149
1921	54,258,431	77,127,498
1922	59,477,177	80,973,935
1923	64,100,864	88,099,016
1924	68,775,041	95,459,697

(*a*) Excluding Mutual Life and Citizens, People's Prudential, Australian Provincial, National Mutual, Western Australian, London and Liverpool and Globe, New York Life, and Mutual Life of United States.

(iii) *Total Assets.* It has been thought advisable to restrict the figures relating to life assurance to business in Australia. Several of the companies whose head offices are in Australia transact, however, a large amount of business elsewhere, viz., in New

Zealand, in South Africa, and in the United Kingdom, while in the case of the foreign companies, the Australian business is insignificant compared with that done elsewhere. Particulars as to this foreign business of both Australian and foreign companies will be found in "Finance Bulletin No. 16" (published by this Bureau), and a short table only is inserted here, showing the total assets of the various companies.

LIFE ASSURANCE COMPANIES.—TOTAL ASSETS, 1922 TO 1924.

Heading.	Amount.		
	1922.	1923.	1924.
	£	£	£
Government and municipal securities	176,458,610	144,837,468	142,684,880
Mortgages	122,341,469	101,969,269	114,888,595
Loans on companies' policies	84,250,676	65,091,066	66,748,612
Railway debentures and debenture stock	175,796,865	136,685,044	142,239,598
Landed and house property	12,349,551	10,190,544	9,812,306
Life interests and reversions	307,697	339,294	350,910
Other investments	7,149,051	2,057,446	7,299,239
Outstanding premiums	7,200,994	6,621,985	7,039,200
Outstanding interest, dividends, and rent	7,789,990	6,323,469	6,792,303
Cash	7,240,532	5,114,661	6,153,494
Establishment and organization accounts	452,626	703,834	796,095
All other assets	4,704,812	4,241,335	3,996,897
Total Assets	606,042,873	484,175,415	508,802,129

6. **New Policies issued in Australia, 1924.**—(i) *Ordinary Business.* During 1924, 89,534 new policies were issued for £31,070,063. The average amount per policy was £347, which compares with an average of £273 per policy for all policies which were in existence in 1924.

(ii) *Industrial Business.* New policies to the number of 263,416 were issued during the year for a total of £12,923,501. The average per policy was £49, which is 30 per cent. more than the average for all industrial policies which were current in 1924.

7. **Policies Discontinued in Australia, 1923 and 1924.**—(i) *Ordinary Business.* The volume of business which from various causes becomes void in each year is always large. The number and amount of policies discontinued in 1923 and 1924, and the reasons for discontinuance are given in the following table :—

ORDINARY LIFE ASSURANCE.—POLICIES DISCONTINUED IN AUSTRALIA, 1923 AND 1924.

Mode.	1923.		1924.	
	No. of Policies.	Amount.	No. of Policies.	Amount.
		£		£
Death or maturity	13,216	2,928,407	14,348	3,101,543
Surrender	18,612	3,720,874	15,697	3,430,204
Forfeiture	35,637	9,951,997	34,139	9,945,305
Total	67,465	16,601,278	64,184	16,477,052

(ii) *Industrial Business.* The number of policies discontinued in this branch each year is also very large. Of the total amount of discontinuance during 1924 only 9 per cent. was due to death or maturity, while 87 per cent. was due to forfeiture.

INDUSTRIAL LIFE ASSURANCE.—POLICIES DISCONTINUED IN AUSTRALIA, 1923 AND 1924.

State.	1923.		1924.	
	No. of Policies.	Amount.	No of Policies.	Amount.
		£		£
Death or maturity	25,902	562,568	31,385	701,722
Surrender	7,048	374,517	6,596	327,879
Forfeiture	128,837	6,258,021	133,984	6,649,206
Total	161,787	7,195,106	171,965	7,678,807

Graphs illustrating the progress of Life Assurance, both Ordinary and Industrial, accompany this chapter.

§ 6. Fire, Marine and General Insurance.

1. Australasian Business.—(i) *General.* Returns are available showing the revenue and expenditure, assets and liabilities, and investments of 41 insurance companies having their head offices either in Australia, New Zealand, or Fiji. The names of these companies, with the location of their respective head offices, are given in the following table :—

AUSTRALASIAN FIRE, MARINE, AND GENERAL INSURANCE COMPANIES.

Company.	Head Office.
Assurance and Thrift	Sydney
Australian Alliance	Melbourne
Australian Mutual Fire	Sydney
Australian National	Melbourne
Australian Provincial	Sydney
Australian Traders'	,,
Automobile	Melbourne
Bankers and Traders'	Sydney
Chamber of Manufacturers	Melbourne
City Mutual Fire	Sydney
Colonial Mutual Fire	Melbourne
Commercial of Australia	,,
Commonwealth General	Sydney
Co-operative	Melbourne
Derwent and Tamar	Hobart
Empire Life and General	Sydney
Farmers' Co-operative, New Zealand ..	Christchurch
Farmers' and Settlers	Sydney
Federal Mutual	,,
Insurance Office of Australia	,,
Mercantile Mutual	,,
Manufacturers' Mutual	,,
Mutual Fire Insurance Co. of Tasmania ..	Launceston
National of New Zealand	Dunedin
New Zealand Insurance Co.	Auckland
New Zealand State Fire Insurance Office ..	Wellington
New Zealand Government Accident ..	,,
Pacific Insurance Co.	Fiji
Queensland Insurance Co.	Sydney
Queensland State Government	Brisbane
South Australian Government	Adelaide
South British	Auckland
Southern Union	Melbourne
Standard of New Zealand	Dunedin
Tasmanian Government	Hobart
United	Sydney
United Service	,,
Victoria	Melbourne
Victoria General	,,
Victoria State Accident	,,
Western Australian Insurance Co.	Perth

(ii) *Revenue and Expenditure.* The accounts given hereunder relate approximately to calendar years. The most important items of revenue and expenditure are given below. While the receipts from premiums have increased during the period under review, the amounts debited to expenses, commission, and taxation and to losses have increased at a greater rate, with the result that the trade surplus has decreased very considerably, amounting in 1922–23 to only £97,452, representing 1.70 per cent. of premium income, but rising in 1924–25 to £691,526, equal to 10.54 per cent. of premium income.

FIRE, MARINE, AND GENERAL INSURANCE COMPANIES.—SUMMARY OF REVENUE AND EXPENDITURE, 1920 TO 1925.

Heading.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25
	£	£	£	£	£
Premiums, less re-insurances ..	5,132,329	6,143,416	5,740,063	6,083,246	6,558,823
Losses	2,637,234	3,361,584	3,378,013	3,345,408	3,452,351
Expenses, commission, and taxes	1,698,406	2,194,452	2,264,598	2,319,513	2,414,946
Trade surplus	796,689	587,380	97,452	418,325	691,526
Interest, rent, etc.	374,751	499,382	515,487	608,823	680,875
Total surplus	1,171,440	1,086,762	612,939	1,027,148	1,372,401
Dividends and bonuses paid ..	378,943	450,477	461,940	523,982	590,412
Ratio to premium income of—					
(*a*) Losses .. per cent.	51.39	54.72	58.85	54.99	52.64
(*b*) Expenses, etc. .. per cent.	33.09	35.72	39.45	38.13	36.82
(*c*) Trade surplus .. per cent.	15.52	9.56	1.70	6.88	10.54

(iii) *Liabilities and Assets.* The liabilities and assets for the same period are set out in the following tables. Comparison of the results for 1924–25 with those for 1920–21 shows that paid-up capital increased by 50 per cent. and reserves by 28 per cent. While loans on mortgage remained stationary, Government securities increased by 59 per cent., and landed and other property showed a growth of over 50 per cent.

FIRE, MARINE, AND GENERAL INSURANCE COMPANIES, 1920 TO 1925.

Heading.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
PAID-UP CAPITAL, RESERVES, AND LIABILITIES.					
	£	£	£	£	£
Paid-up captial	3,879,641	4,652,348	5,100,651	5,688,108	5,851,076
Reserves and re-insurance funds(*a*)	5,282,399	5,574,784	5,530,537	6,099,482	6,784,411
Undivided profits	503,657	493,388	455,992	608,361	645,024
Losses unsettled	893,312	811,979	861,973	828,398	852,267
Sundry creditors, etc.	1,822,914	1,970,797	1,815,836	1,914,873	2,216,401
Dividends, etc., to pay	310,333	322,257	326,287	326,047	350,057
Life assurance funds (*b*) ..	480,608	736,083	947,669	1,390,176	1,867,294
Total Liabilities ..	13,172,864	14,561,636	15,038,945	16,855,439	18,566,530
INVESTMENTS AND OTHER ASSETS.					
	£	£	£	£	£
Loans on mortgage	1,020,195	995,702	908,972	841,059	1,017,259
Government securities, etc. ..	6,433,893	7,274,220	8,177,285	9,283,301	10,231,700
Landed and other property ..	1,743,536	1,929,951	2,001,155	2,454,598	2,644,736
Fixed deposit, etc.	1,623,628	1,440,612	1,119,008	1,308,128	1,403,416
Loans on life policies (*b*) ..	8,795	17,062	18,844	34,631	46,989
Investments	65,681	93,704	98,630	89,721	121,363
Cash and bills receivable ..	584,694	785,979	706,739	819,536	868,604
Sundry debtors and other assets ..	1,693,042	2,024,406	2,008,312	2,024,465	2,232,463
Total assets ..	13,172,864	14,561,636	15,038,945	16,855,439	18,566,530

(*a*) Including amount required as reserves against unexpired risks.
(*b*) Some of the companies transact Life Business.

(iv) *Marine Insurance.* Separate returns regarding this branch of insurance are not available. Act No. 11 of 1909, "An Act relating to Marine Insurance," passed by the Commonwealth Parliament, and assented to on the 11th November, 1909, altered the conditions under which marine policies had up till then been issued.

§ 7. Friendly Societies.

1. **General.**—Friendly societies are an important factor in the social life of the community, as probably one-third of the total population of Australia comes either directly or indirectly under their influence. Their total membership is nearly 550,000, but as certain benefits, such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must, even when due allowance is made for young and unmarried members, be multiplied by about four to arrive at the total number of persons more or less connected with these societies. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules are conformable to the law, and that the scale of contribution is sufficiently high to enable the promised benefits to be conferred on members. Societies are obliged to forward annual returns as to their membership and their finances to the Registrar, and reports are published in most of the States dealing with the returns thus received.

In the following tables the figures refer to the year 1924, with the exception of New South Wales and Victoria, the figures for which relate to the year ended 30th June, 1925, and of Western Australia, the figures for which are based on the eighteen months ended 30th June, 1925.

2. **Number of Societies, Lodges, and Members.**—The number of different societies and lodges, the total number of benefit members at the end of the year, and their average number during the year are shown in the following table :—

FRIENDLY SOCIETIES.—SOCIETIES, LODGES, AND MEMBERS, 1924.

State.	Number of Registered Friendly Societies.	Number of Lodges.	Benefit Members at end of year.	Average No. of Benefit Members during the year.
New South Wales	34	2,214	209,085	206,851
Victoria	58	1,470	155,378	154,609
Queensland..	18	630	61,571	60,618
South Australia	17	643	74,073	73,264
Western Australia	15	324	21,350	20,470
Tasmania	20	184	24,410	24,535
Total	..	5,465	545,867	540,347

With regard to the number of registered Friendly Societies no total is given for Australia, since many of the societies operate in all the States.

3. **Sickness and Death Returns.**—Sick pay is generally granted for a number of months at full rates, then for a period at half rates, and in some societies is finally reduced to quarter rates. The following table shows the total number of members who received sick pay during the year, the number of weeks for which they received pay in the aggregate, and the average per member sick, and further the number of benefit members who died during the year, together with the proportion of deaths per thousand average members :—

FRIENDLY SOCIETIES.—SICKNESS AND DEATH RETURNS, 1924.

State.	Number of Members who received Sick Pay.	Total Number of Weeks Sick Pay Granted.	Average Number of Weeks per Member Sick.	Deaths of Benefit Members and Wives.	Proportion of Deaths to 1,000 Average Benefit Members.
New South Wales ..	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)
Victoria..	28,848	267,388	9.27	1,869	12.08
Queensland	10,586	82,941	7.83	446	7.35
South Australia	13,603	130,933	9.63	1,022	13.95
Western Australia (*c*) ..	3,115	24,610	7.90	146	10.65
Tasmania	4,520	38,889	8.60	374	7.13
Total	(*b*) 60,672	(*b*) 544,761	(*b*) 8.98	(*b*) 3,857	(*b*) 11.56

(*a*) Not available. (*b*) Exclusive of New South Wales (*c*) Based upon figures for eighteen months.

4. Revenue and Expenditure.—(i) *Revenue.* The financial returns are not prepared in the same way in each State, but an attempt has been made in the subjoined table to group the revenue under the main headings :—

FRIENDLY SOCIETIES.—REVENUE, 1924.

State.	Entrance Fees, Members' Contributions, and Levies.	Interest, Dividends, and Rents.	All other Income.	Total Revenue.
	£	£	£	£
New South Wales	732,194	160,801	52,573	945,568
Victoria	518,720	205,695	75,613	800,028
Queensland	222,005	65,483	(*b*)	287,488
South Australia	222,429	95,889	22,285	340,603
Western Australia (*a*) ..	63,553	21,447	33,463	118,463
Tasmania	79,861	17,608	14,667	112,136
Total	1,838,762	566,923	198,601	2,604,286

(*a*) Two-thirds of figures for eighteen months. (*b*) Included in interest, dividends, and rents.

(ii) *Expenditure.* The returns relating to expenditure are more complete than those for revenue. The figures show that the excess of revenue for the year was £591,370 for Australia. The revenue exceeded the expenditure by more than one pound per average benefit member.

FRIENDLY SOCIETIES.—EXPENDITURE, 1924.

State.	Sick Pay.	Medical Attendance and Medicine.	Sums Paid at Death of Members and Members' Wives.	Administration.	All other Expenditure.	Total Expenditure.
	£	£	£	£	£	£
New South Wales ..	249,915	288,456	63,302	145,634	27,775	775,082
Victoria	169,879	209,719	31,900	96,405	64,369	572,272
Queensland	58,622	87,082	22,750	48,023	(*b*)	216,477
South Australia ..	77,894	76,848	33,751	44,848	14,461	247,802
Western Australia (*a*) ..	18,705	23,026	4,109	21,637	33,082	100,559
Tasmania	26,922	27,347	18,772	16,999	10,684	100,724
Total ..	601,937	712,478	174,584	373,546	150,371	2,012,916

(*a*) Two-thirds of figures for eighteen months. (*b*) Included in administration.

It appears from the above figures that sick pay averaged about 22s. per week, but, as the returns include pay at half and quarter rates, and as the proportion of these to full rates is not stated, the average given must be taken for what it is worth. Medical attendance and medicine came to about 26s. per average benefit member.

5. Funds.—The two foregoing tables show that the surplus of revenue over expenditure in all States amounted to £591,370 for the year, and a small surplus must, of course, result annually in every society which levies adequate contributions to enable it to meet all possible claims. These accumulations of profits are generally invested, and the subjoined table shows the division into invested and uninvested funds :—

FRIENDLY SOCIETIES.—FUNDS, 31st DECEMBER, 1924.

State.	Invested Funds.	Uninvested Funds.	Total Funds.
	£	£	£
New South Wales (*b*)	3,042,054	(*a*)	3,042,054
Victoria (*b*)	3,983,686	82,122	4,065,808
Queensland	1,293,343	4,509	1,297,852
South Australia	1,818,981	23,152	1,842,133
Western Australia (*b*)	370,307	8,446	378,753
Tasmania	311,428	15,087	326,515
Total	10,819,799	133,316	10,953,115

(*a*) Included in Invested Funds. (*b*) At 30th June, 1925.

The total funds amounted, therefore, to over £20 per member at the close of the year under review.

§ 8. Probates.

1. Probates and Letters of Administration.—The value of the estates left by deceased persons gives some idea of the distribution of property among the general population. There were in 1924, 41,717 deaths of adult persons, while the number of probates and letters of administration granted during the same period was 16,464. It would therefore appear that about two-fifths of the adults who died during the year were possessed of sufficient property to necessitate the taking out of probate. The details for each State are shown in the table hereunder :—

PROBATES AND LETTERS OF ADMINISTRATION, 1924.

State.	Number of Estates.			Net Values of Estates.		
	Probates.	Letters of Administration.	Total.	Probates.	Letters of Administration.	Total.
				£	£	£
New South Wales (*b*)	6,410	(*a*)	6,410	17,970,385	(*a*)	17,970,385
Victoria	4,053	1,487	5,540	12,831,268	(*a*)	12,831,268
Queensland.. ..	784	138	922	3,046,109	212,872	3,258,981
South Australia ..	1,553	448	2,001	3,867,000	198,615	4,065,615
Western Australia ..	615	334	949	1,500,581	138,898	1,639,479
Tasmania	510	112	622	1,184,886	96,120	1,281,006
Northern Territory (*b*)	4	16	20	22,698	5,255	27,953
Total ..	13,929	2,535	16,464	40,422,927	651,760	41,074,637

(*a*) Included with Probates. (*b*) For year ended 30th June, 1925.

2. Intestate Estates.—The number of intestate estates placed under the control of the Curator during the year, and the amount of unclaimed money paid into Consolidated Revenue in each State during the year 1924, are given hereunder :—

INTESTATE ESTATES, 1924.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.Ter.	Total.
Intestate estates placed under control of Curator during 1924—								
Number	(*a*)	230	1,404	259	304	109	13	(*c*) 2,349
Value .. £	(*a*)	(*b*)	747,797	75,039	16,114	23,220	1,482	(*d*)863,652
Unclaimed money paid into Consolidated Revenue by Curator during 1924 £	75,672	14,865	21,486	2,011	3,615	..	1,695	119,344

(*a*) Included with Probates. (*b*) Not available. (*c*) Excluding New South Wales.
(*d*) Excluding New South Wales and Victoria.

CHAPTER IX.

EDUCATION.

§ 1. Evolution of Educational Systems in Australia.

1. Educational Systems of the States.—(i) *Place of New South Wales in Australian Education.* The first settlement in Australia being in New South Wales, it is but natural that Australian education should have had its beginning in that State. In the evolution of educational method and system in Australia, New South Wales also has played a leading part, and has had practically a dominating influence. The subject is dealt with in some detail in No. I. and No. II. issues of the Commonwealth Official Year Book, but it is not proposed to repeat it in the present volume. (See also 2 hereunder.)

(ii) *Educational Systems of other Commonwealth States.* A more or less detailed account of the origin and development of the educational systems of the other States also appears in No. I. and No. II. issues of the Year Book. Later details are given hereunder.

(iii) *Medical Inspection of State School Children.* See Chapter XII., Public Hygiene.

2. Recent Development in State Educational Systems.—(i) *New South Wales.* In previous issues of the Year Book a brief account was given of the development of the New South Wales educational system since the year 1911. (See Year Book No. 17, p. 447.) Reference was made to the linking-up of the State School System with the University following on the passing of the University Amendment Act and Bursary Endowment Act of 1912, to the influence on attendance of the provisions of the amending Public Instruction Act of 1916, to the increased attention devoted in recent years to school hygiene and to medical and dental inspection, and to the methods adopted of dealing with the problem of the backward or deficient child. Attention was also directed to the spread of agricultural teaching by the establishment of special agricultural schools, together with the special " rural schools " in country centres. (See also § 2, 4 (v) hereinafter.)

Fees for high school instruction were re-imposed in 1923, but the regulation in connexion therewith was cancelled in 1924, thus restoring the position formerly held whereby no fees are charged for admission to any school controlled by the Department.

The Reports for the last two years draw attention to the disabilities under which the Education Department labours owing to shortage of teachers and lack of necessary funds for new buildings, equipment, and renovations. During 1923 an amount of £503,000 was obtained from loans and a sum of £100,000 voted in the ordinary way for expenditure on buildings. For the year 1924–25 a sum of £265,000 was voted for buildings, and this was supplemented by £100,000 from Loan Expenditure Suspense Account. These funds were utilized in the provision of urgently needed works, and it is hoped shortly to satisfy all reasonable requirements.

Excellent work is being done by the Parents and Citizens' Associations which have replaced the old School Boards.

(ii) *Victoria.* Some account of the development of educational activity in Victoria up to the close of the year 1922 was given in Year Book No. 17, p. 448. The principal task confronting the educational authorities during the last few years has been to overtake arrears in the way of providing sufficient new schools and remodelling existing unsatisfactory buildings. A feature of the work in 1924 was the increased attention given by teachers and inspectors to the use of intelligence tests as a means to secure more effective classification of pupils. A group test has been worked out by the Training College and will be given an extensive trial in 1926. During the last three years nine of the higher grade teachers from Victorian schools have taught in England and in Canada under the exchange system, and ten were on leave for travel and study chiefly in England and France. Considerable benefit has accrued, especially in the case of teachers of modern languages, of history and of geography. Excellent work is being done by the various local committees and mothers' clubs formed in connexion with the schools, and it is estimated that more than 20,000 people are interesting themselves in this direction.

(iii) *Queensland.* A brief account was given in Year Book No. 17, p. 448, of the changes introduced into the Educational System of Queensland by the Act of 1910. Reference was also made to the establishment of High Schools in 1912, of a Teachers' Training College in 1914, of rural schools in 1917, and other matters. Tuition by correspondence was initiated in 1922 with a few pupils, but at the end of 1924 there were 30 teachers and about 1,900 pupils. In 1923 classes were formed at various centres for giving special instruction to backward, sub-normal, and defective children, and operations in connexion therewith were extended in 1924. A travelling Domestic Science School was initiated at Cunnamulla towards the end of the year, a specially designed and equipped railway car having been constructed for this object. Apart from the rural schools and technical classes special vocational classes were opened in several centres in 1923.

(iv) *South Australia.* In Year Book No. 17, p. 449, attention was drawn to the modifications introduced into the educational system in 1921, in the way of a new course of instruction in the primary schools; the adoption of new methods of training, examination, and classification of teachers; and the revision of the system of inspection. Developmental work in 1924 consisted principally in (*a*) provision of greater facilities for teaching elementary agriculture, woodwork, and domestic science in the rural schools, (*b*) establishment of central schools, (*c*) extension of the activities of the medical branch, (*d*) introduction of methods of dealing with backward and mentally defective children, (*e*) initiation of a progressive building policy.

The recent substitution of local School Committees, each of which functions for one school only in place of the Boards of Advice which looked after groups of schools, has been attended by very satisfactory results. Greater provision of helpful equipment for schools has ensued, libraries have been established or extended, and playgrounds improved, etc. Excellent work has also been done by the mothers' clubs established in connexion with the Infant Schools.

(v) *Western Australia.* A brief account was given in Official Year Book No. 17, pp. 449–50, of the changes and improvements introduced into the educational system of Western Australia during the years 1912 to 1921, but considerations of space preclude its repetition in the present issue. During 1923 efforts were made at a more systematic correlation of the work done in the various courses at the central schools with the practical needs in the life work of the scholars. To assist children in the outback districts the number of special rural schools, referred to later, was increased, and in 1924 amounted to 40, while the system of teaching by correspondence has been greatly extended. Excellent work is being done by the Parents and Citizens' Associations formed in connexion with the schools. The spread of secondary education has resulted in a satisfactory increase in efficiency of candidates for the teaching profession, while good results have attended the arrangements for an interchange of teachers with the London County Council authorities.

(vi) *Tasmania.* Allusion was made in Year Book No. 17 (page 450) to the development on modern lines in recent years of the primary branch of the educational system of Tasmania, the establishment of secondary schools and of special infant schools, the extension of correspondence teaching, the provision of schools of method as an adjunct to a more efficient system of training teachers, and the methods adopted for dealing with the problem of retardation. Limits of space preclude the repetition of this information in the present issue. In common with other States, some difficulty has been experienced in securing suitable living accommodation for teachers in charge of outback schools, but it is hoped that this will in part be met by the projected scheme of consolidation of schools. During 1924 a commencement was made with the experiment of conveying children in two districts to a central school, instead of providing small local schools. It is proposed to extend this system as opportunity allows. In connexion with the problem of retardation, a Girls' Welfare School was established in 1924 at Newtown, and represents the first attempt to deal with children from 14 to 16 years of age. Provision for elementary instruction in agriculture at primary schools in certain centres was also made in 1924. Recently the practice has been adopted of allowing inspectors to make periodical visits to the mainland states for the purpose of gaining additional experience.

(vii) *Northern Territory.* Although the number of children of school age in the Territory is small, nevertheless ample provision has been made by the Commonwealth Government for primary education. State schools are in operation at Darwin, Parap, Pine Creek, Alice Springs, and Emungalan. There is also a school for aboriginal and half-caste children at Kahlin Compound, Darwin. Children of scattered settlers are visited and instructed by an itinerant teacher, while six families are receiving tuition by correspondence. In 1924, an inspector from the Queensland Education Department re-organized the educational system on the lines of that existing in Queensland. An inspection will be made annually in future by an officer from the Queensland Department, and scholarships awarded may be taken out at approved secondary schools in Queensland.

(viii) *Present position of State Education in Australia.* Throughout Australia primary education is compulsory and free, while there exists in all States a more or less liberal provision of scholarships and bursaries to the Higher State Schools, to the Secondary Schools, and to the Universities. Provided that the requisite standard is reached, it is, of course, permissible for children to receive home tuition, or to attend so-called private schools. The orientation, lighting, and ventilation of school buildings are being modernized. In all of the States periodical medical inspection of the children is in force. (A detailed statement of the work being done in this direction will be found in the chapter dealing with Public Hygiene.) Methods of training teachers are now better developed, and although the " pupil teacher " system with its effects has not been wholly eliminated it appears to be gradually vanishing. (The methods adopted in the various States for the selection and training of teachers are described in some detail in § 2, 6, hereinafter.) There has been a wider employment of kindergarten and Montessori principles in the early stages, and the more or less purely abstract teaching of the older days has been largely replaced by concrete methods. Self-activity on the part of the pupils is being further cultivated by the partial adoption of the " Dalton " system or modifications thereof. Such subjects as nature study, manual training, music, drawing, business practice, and domestic economy have received a general impetus. Greater attention has been given to the scientific classification of pupils, and to the difficult problem of dealing with sub-normal or defective children. (In the Report of the Education Department of South Australia for the year 1923, the Medical Inspector asserts that a large proportion of juvenile delinquency is due to mental deficiency.) Moreover, as will be seen from the above, and from § 2, 4, the State Education Departments are increasing their activities in the direction of secondary education. Lastly, the system of inspection has been considerably remodelled. Under the old system, the inspector was little more than an examining officer, but, under the present régime the primary duty of this officer consists in guiding and directing the teaching in accordance with approved methods. (See also § 6, Technical Education.)

(ix) *Co-ordination of Educational Activities.* As pointed out already, the educational system of New South Wales may now be considered as a more or less homogeneous entity, the various stages succeeding one another by logical gradation from kindergarten to university. In the other States development is proceeding on somewhat similar lines, activity in this respect being greatly helped by Inter-State conferences of directors of education and of inspectors and teachers. At the conference of directors held at Perth in 1924 the chief subjects dealt with were methods and cost of secondary education ; afforestation and agricultural education ; district schools ; correspondence teaching ; Dalton methods ; and methods of dealing with retarded and defective children.

§ 2. State Schools.

1. **General.**—The State Schools, or, as they are sometimes termed, the " public " schools, of Australia comprise all schools directly under State control, in contradistinction to the so-called " private " schools, the bulk of which, though privately managed, nevertheless cater for all classes of the community. Separate information regarding Technical Education is given in § 6, but the junior technical schools are included hereunder.

2. Returns for Year 1924.—(i) *General.* The following table shows the number of State Schools, together with the teachers employed and the enrolment and "average attendance" in each State during the year 1924:—

STATE SCHOOLS.—RETURNS, 1924.

State or Territory.	Schools.(*a*)	Teachers.(*b*)	Scholars Enrolled.	Average Attendance.	Percentage of Attendance on Enrolment.
New South Wales (*c*) ..	3,476	10,196	316,454	268,602	84.9
Victoria	2,640	7,346	237,744	188,939	79.5
Queensland	1,719	4,041	135,547	104,283	76.9
South Australia	1,037	2,678	83,483	68,759	82.4
Western Australia ..	818	1,949	55,478	48,301	87.1
Tasmania	521	1,202	32,283	26,898	83.3
Northern Territory ..	7	12	267	208	77.9
Australia	10,218	27,424	861,256	705,990	82.0

(*a*) Schools open during year. (*b*) Exclusive of sewing mistresses. (*c*) Including Federal Capital Territory.

The decrease in the birth rate and the effect of the war years are reflected in the figures for Western Australia and Tasmania, the enrolments in these States showing very slight increases over those for 1923, while the attendance figures for 1924 in Western Australia were about 200 lower than in 1923.

(ii) *Schools in the Federal Capital Area.* During the year 1924 fifteen State Schools were in operation in the Federal Capital Territory (Yass-Canberra). The pupils enrolled numbered 615 and the average attendance 481. Cost of upkeep amounted to £5,751. By arrangement with the Federal Government these schools are conducted by the New South Wales Education Department on the same lines as the ordinary State Schools, the Department being recouped for expenditure.

3. Growth of Enrolment and Attendance.—The enrolment and average attendance at the State Schools in Australia are given below for the years 1891, 1901, 1911, and for each year of the period 1920 to 1924:—

STATE SCHOOLS.—ENROLMENT AND ATTENDANCE.—AUSTRALIA, 1891 TO 1924.

Year.	Total Population. (*a*)	Enrolment.	Average Attendance.	Year.	Total Population. (*a*)	Enrolment.	Average Attendance.
1891 ..	3,421	561,153	350,773	1921 ..	5,509	819,042	666,498
1901 ..	3,825	638,478	450,246	1922 ..	5,633	837,426	688,264
1911 ..	4,573	638,850	463,799	1923 ..	5,750	848,882	685,233
1920 ..	5,411	801,405	632,182	1924 ..	5,874	861,256	705,990

(*a*) At 31st December, in thousands.

The percentage of attendance on enrolment in 1924 amounted to 82.0, as compared with 80.7 in the preceding year, the lower figure in 1923 being due chiefly to the prevalence of epidemics of measles, whooping cough, and other ailments in New South Wales, Victoria and Tasmania. The attendance in Queensland was also adversely affected by unfavourable weather conditions.

4. Distribution of Educational Facilities.—(i) *In Sparsely-settled Districts.* It has always been the aim of the State to carry the benefits of education into the remotest and most sparsely-settled districts. This is effected in various ways:—(*a*) By the establishment of Provisional Schools, i.e., small schools in which the attendance does not amount to more than about a dozen pupils, these institutions merging into the ordinary public school list when the attendance exceeds the minimum : (*b*) When there are not enough children to form a provisional school, what are known as Half-time Schools are formed, the teacher visiting them on alternate days : (*c*) In still more sparsely-peopled districts, an itinerant teacher goes from house to house within a certain radius. Thus, in Queensland during 1924 the 11 itinerant teachers' districts covered 315,000 square miles of country, while a distance of 41,465 miles was travelled in visiting 1,080 children. In this State also the Education Department has established what are known as Saturday Schools, in which small groups of children in outlying districts are visited by the nearest teacher on Saturdays and receive the benefit of several hours' instruction. These schools, of which there are ten, have been warmly welcomed in the districts in which they are established, inasmuch as under this system the children "outback" receive a greater amount of instruction than is possible under the system of itinerant teachers. Provision has been made for a vocational "top" to be established at schools in important distributing centres of inland pastoral areas in Queensland and special classes receive instruction in manual work, commercial work, and domestic economy. Itinerant teachers capable of imparting instruction in domestic and manual work have also been appointed to visit parents and children at various localities in the Central District. Further, in New South Wales, Victoria, South Australia, Western Australia and Tasmania parents in the thinly-peopled areas are allowed to club together and build a school, which receives aid from the Government in the form of a yearly subsidy and grant of school material. In some cases the Department also provides the building. During 1924, subsidy was paid to 694 schools in New South Wales. Victoria had 4 schools of this type, Western Australia 20, and Tasmania 47 : (*d*) Several "travelling" schools have been established in New South Wales, the teacher being supplied with a van carrying a tent for himself and one for use as a school, together with books and apparatus for primary teaching. South Australia has devised attractive portable schools to meet the needs of new districts and temporary settlements. Queensland has two travelling housecraft schools for the instruction of girls, as well as adults, in the smaller centres. Railway Camp Schools are established in some States on the sites of extensive railway works : (*e*) All the States provide also for education, by correspondence, of children in localities not at present reached by the methods outlined above. At the end of 1924 nearly 2,300 children were on the roll of the Correspondence School in New South Wales. In Victoria, about 400 invalid and isolated children were receiving instruction by this means. As evidence of the success of the system, it is stated that in some cases where families have moved into a district where attendance at school is possible, the parents have asked for the correspondence lessons to be retained. The first Correspondence School in Queensland was opened in February, 1922, with an enrolment of 37 pupils, but at the end of the year 1924 the net enrolment amounted to 1,877. In cases where parents can afford some assistance to the children it is considered that better results are obtained than by the itinerant teacher system. In South Australia the activities of the Correspondence School at Adelaide extend as far as Point Charles in the Northern Territory, and in 1923 a Dutch family near Hermansburg Mission Station in Central Australia applied for enrolment. During the year 1924, 710 children received instruction. A library has been established in connexion with the school, and the books are much appreciated by both parents and children "outback." The enrolment in correspondence classes in Western Australia during 1924 was over 1,000, and a staff of nineteen teachers is employed on the work. In addition, 1,109 children at small schools, and 67 who had left school, were taking correspondence lessons in special subjects. There are eight teachers attached to the Correspondence School in Hobart, and a visiting teacher tours the whole island, calling, as far as possible, at all the isolated dwellings. The number on the roll in 1924 was about 250.

(ii) *Centralization of Schools.* The question of centralization of schools adopted so successfully in America and Canada has received some attention in Australia, and particularly in New South Wales. It is recognized that a single adequately staffed and well-equipped central institution can give more efficient teaching than a congeries of small scattered schools in the hands of less highly trained teachers, and the small schools in some districts were therefore closed and the children conveyed to the central institution. The principle was first adopted in New South Wales in 1904, and in 1924 a sum of £38,242 was expended in boarding allowance and conveyance to central schools. Cost of conveyance to State Schools in Victoria during 1924 was returned as £6,157. In South

Australia the sum of £1,919 was disbursed in 1924 in connexion with travelling expenses of school children, while £14,234 was spent in Western Australia, and about £700 in Tasmania.

(iii) *Education of Retarded and Defective Children.*—(*a*) *New South Wales.* A school for the deaf and dumb and the blind has been in operation for many years, and a scheme is under consideration for the provision of skilled teaching for the retarded and defective. A certain amount of scientific work in this connexion has been carried out at the Training College.

(*b*) *Victoria.* In this State there are special schools for the deaf and dumb and the blind, a school for epileptics, and two schools for the feeble-minded. Backward children in the metropolitan area and in several provincial centres are drafted into tutorial classes, under specially-trained teachers, and it is proposed to establish a residential training home.

(*c*) *Queensland.* Classes for the special instruction of backward and sub-normal or defective children have been in operation since 1923. The classes are held in Brisbane and the chief provincial towns and the results so far have been very satisfactory.

(*d*) *South Australia.* An expert psychologist has been appointed to examine and classify retarded and mentally defective children, train the special teachers required, and give instruction to students at the Training College.

(*e*) *Western Australia.* In collaboration with the school medical officers, the teachers keep records of special or defective children and take steps to ensure attention and help in making improvement.

(*f*) *Tasmania.* Special classes to deal with retarded or defective children have been established in various centres, and in 1924 a Girls' Welfare School was opened at New Town, this being the first attempt to deal with children from 14 to 16 years of age.

(iv) *Evening Schools.* Evening Public Schools have been in existence for many years in some of the States, but their progress has been uncertain. In New South Wales the 53 Evening Continuation Schools had an effective enrolment of 4,102 and an average attendance of 3,121 in 1924. The schools for boys are classed as commercial, commercial preparatory, junior technical, and junior technical preparatory, and for girls as domestic and domestic preparatory. Attendances at the schools for boys numbered 2,457, and at those for girls 664. The comparatively high proportion of attendance to enrolment shows that the institutions are attractive. In Victoria there were 6 evening continuation classes in operation during 1924, the average attendance being 49. Although the Education Act in Victoria gives authority for the establishment of evening continuation classes at which the attendance of boys up to the age of seventeen years and living within a radius of 2 miles may be made compulsory for six hours a week, considerations of expense have prevented the free exercise of this power. Evening Continuation Schools have been established under regulation in South Australia, and are intended principally to help the working boy to improve his general education. In Western Australia evening continuation classes were held at 21 centres in 1924, with an average enrolment of 2,668 pupils.

(v) *Higher State Schools.* (*a*) *New South Wales.* In New South Wales, public schools which provided advanced courses of instruction for two years for pupils who have completed the primary course were classed as Superior Schools. These were reorganized in 1913 as Day Continuation Schools, and divided into Superior Commercial Schools, Superior Junior Technical Schools, and Superior Domestic Schools for Girls. During 1924 there were 90 schools of this type in operation, of which 16 were in the Commercial group, 24 in the Junior Technical, and 50 in the Domestic group, with an average attendance of 12,014 in the sixth and seventh classes. It is believed, however, that greater efficiency could be achieved by reducing the number of these schools and establishing Central "Superior Public Schools" instead. Provision has also been made for the more advanced education of children in country centres by the establishment of 12 District Schools. These schools, which in 1924 had an average attendance of 964, are specially staffed, and, in addition to the usual work, undertake the preparation of students for admission to the training colleges. Composite Courses were given in 1924 at 409 country schools for the benefit of pupils anxious to continue their education beyond the primary course, but unable for various reasons to attend a centre where a High School or other super-primary school exists. The average attendance at these courses was 3,809. In addition, there are 28 High Schools in the State. These had in 1924 an average attendance of 6,988. The growing demand for High School education in the metropolis and in country centres led to the establishment of Intermediate High Schools, and in 1924 the number had increased to 32, with an average attendance of 5,645. In accordance with Departmental regulations, there is a liberal distribution of scholarships and bursaries to the higher State Schools and to the University. During the last quarter of 1924, 780 pupils holding bursaries were receiving instruction at High, Intermediate High, and District Schools. Under the provisions of the University Amendment Act of 1912, 200 exhibitions were awarded in 1924 to successful students at the leaving certificate examinations, 122 of these being given to State School pupils and 78 to students from registered secondary schools.

The Sydney Grammar School (not a "State" School in the ordinary acceptation of the term), which receives a State endowment of £1,500 a year, had, in 1924, an enrolment of 611 pupils, and an average attendance of 575.

(*b*) *Victoria.* In Victoria, action was taken in January, 1912, to give effect to the provisions of the Education Act of 1910, with regard to the decentralization of the system of secondary education. Forty-five Higher Elementary and 33 District High Schools have been established, and, to obviate congestion at the High Schools, Higher Elementary Classes are carried on at 23 "Central" Schools. The average attendance for 1924 at the Higher Elementary Schools was 3,001, of whom 1,449 were girls, at the District High Schools 6,422, of whom 3,160 were girls, while 1,308 boys and 1,375 girls were receiving secondary teaching in the Central Schools. The qualifications for admission to the High Schools and Higher Elementary Schools are that pupils shall be not less than 12 years of age, shall possess the qualifying certificate or its equivalent, and that their parents shall undertake that the children will remain at school for four years. For the first two years there is a common course for all pupils, thereafter replaced by four special courses :—(1) A preparatory professional course for pupils preparing to proceed to the University, to enter the teaching profession, or to gain a sound general education ; (2) an agricultural course to be taken in Agricultural High Schools ; (3) a commercial course ; and (4) a domestic arts course for girls. Parallel with these courses an industrial course has been developed for pupils who intend to enter upon some form of industrial occupation.

The demand for places in the metropolitan High Schools is in excess of the available accommodation, and although the "Central" Schools, already referred to, have to some extent relieved the congestion, increased provision is urgently needed.

In the Junior Technical Schools pupils are enrolled at 12 to 13 years of age for a course extending over three years designed to qualify for entrance to the Senior Technical Schools. There were 26 of these junior schools in operation at the end of 1924 with a net enrolment of 5,327 pupils.

Schools of Domestic Arts have been established—five in Melbourne, one in Ballarat, and one in Bendigo. At these institutions, in addition to continuing their general education, the girls receive special instruction in cookery, needlework, and various home duties. A modified course in domestic arts is given to senior pupils at Maryborough and Castlemaine.

Scholarships granted by the Department are as follows :—(*a*) One hundred junior, tenable for four years at a District High School or approved Secondary School, with allowance of £26 per annum for board when required ; (*b*) Forty-four senior, tenable three to six years, with allowance of £40 towards expense of course at University ; (*c*) Fifty junior technical, giving free tuition for three years at a Junior Technical or other approved school, and, in certain cases, board allowance of £26 per annum ; (*d*) Fifty-five senior technical, giving free tuition for approved courses at Technical Schools, with £30 allowance for day students, and £10 for night students ; (*e*) Sixty teaching, similar in other respects to junior ; (*f*) Twenty nominated courses, giving three to six years' free tuition in agriculture, mining, or veterinary science at the University, with allowance in certain cases for maintenance ; (*g*) Fifty free places in any course at the University with tenure up to six years, open to candidates attending district high schools, technical schools, and registered secondary schools ; (*h*) Five free places in an approved course at the University open to Government officers other than teachers ; (*i*) Fifteen free places in a University course in Arts, Commerce, Science, or Education to teachers of the Education Department. Allowances are also made in some cases to high school and technical school pupils whose parents are in necessitous circumstances, while free tuition is granted to all children of deceased or totally incapacitated soldiers and sailors.

(*c*) *Queensland.* Prior to the year 1912, Queensland did not possess any distinctly secondary schools under State control, but in February of that year High Schools were opened at Warwick, Gympie, Bundaberg, Mount Morgan, Mackay, and Charters Towers. Tuition at these schools is free, but students must pass a qualifying entrance examination. Three courses of study—General, Commercial, and Domestic are provided. The General Course leads up to the University, and students are enabled to matriculate from the High Schools. In 1917 and 1920 High Schools were opened at Gatton and Roma respectively. "The Brisbane Junior High School" was opened in 1920, but from 1st July, 1921, was constituted a fully developed High School. High Schools are also conducted as departments of the technical colleges at Toowoomba, Rockhampton, Cairns, and Townsville. In smaller centres where an average of not less than 25 qualified pupils can be obtained, secondary tuition was provided at existing State Schools, and this was arranged for at Herberton, Childers, Dalby, Kingaroy, Pittsworth, Southport, Cairns, Wynnum Central, and Emerald. Owing to diminished attendance some of these secondary "tops" have been eliminated. The enrolment at High Schools in 1924 was 1,606, and the daily attendance 1,175. There are, moreover, ten Grammar Schools—six for boys and four for girls—each of which was subsidized by the State to the extent of £750 per annum, and in addition received a payment of £250 per annum for providing five scholarships for State scholars. Owing to representations regarding increased cost of maintenance, the grants were increased in 1920, and the total endowment paid to these schools in 1924 amounted to £17,800. The Government also pays *per capita* fees in payment for the tuition of State scholarship-holders in attendance at the Grammar Schools. During 1924 the payments for fees came to £15,029. The enrolment at the Grammar Schools in 1924 was 2,054 and the average attendance 1,673. Since the year 1909 these schools have been regularly examined by the inspectors of the Education Department.

Scholarships covering a period of four and a half years at a secondary school are granted on the results of examination. In the case of holders who live away from home while attending a secondary school the allowance is £30 per annum, but holders who live at home receive free text-books and an allowance of £4 per annum.

As a result of the 1924 examinations, held in April, scholarships were awarded to 472 pupils. Of the successful candidates 289 were granted the allowance of £4 per annum and free text-books, and 183 received the allowance of £30.

Prior to the establishment of the Queensland University, three exhibitions per annum to approved Universities were granted. These were instituted in 1878, and in all 96 exhibitions were granted. With the opening of a local University in 1910, the necessity for such exhibitions disappeared, and, since 1911, their place has been taken by twenty scholarships annually to the Queensland University. Each scholarship is tenable for three years, and carries an allowance of £26 per annum if the holder lives at home and attends the University, or £52 per annum board allowance where necessary.

(*d*) *South Australia.* Including the Adelaide High School, there were altogether 23 High Schools open in South Australia in 1924, with an enrolment of 4,136, an average attendance of 3,508, and a staff of 155 teachers. In addition to giving secondary education, these institutions form a valuable source from which the Department can draw a supply of young teachers. One hundred qualifying exhibitions to these schools are open to pupils who have completed the primary course, 50 of such exhibitions being reserved for country children. The exhibitions are of the value of £10 each, with an additional allowance of £20 per annum if it is necessary for the holder to live away from home.

In order to meet the needs of children who for various reasons do not enrol at the High Schools, eighteen Central Schools were established in 1924. The schools provide an education with a vocational bias for pupils who will leave school at the age of 15 or 16 years to enter upon industrial, commercial, or domestic pursuits, and they opened with an enrolment of 742 boys and 748 girls.

The Department has also established 18 Higher Primary Schools in order to provide increased facilities for higher education to country children. These schools cover the first and second years' work at the High Schools, and students who complete this work may compete for 24 junior exhibitions tenable for three years at a High School.

Pupils from the High Schools may compete for 12 bursaries tenable at the University, the School of Mines, or the Roseworthy Agricultural College. The bursaries carry exemption from fees, with an allowance of £20 per annum, which may be increased to £40 if the bursar is living away from home.

(*e*) *Western Australia.* The enrolment at the seven High Schools in 1924 was 1,388 and the average attendance 1,293. In addition, the primary schools include a number of Central Schools in which the upper classes are collected from various contributory schools in the surrounding districts. These schools provide graduated professional, commercial, industrial, and domestic courses. Altogether 2,891 pupils were taking these courses, while 625 children in country towns were receiving instruction beyond the primary stage. Entrants to State secondary schools must have passed an examination identical with that for secondary school scholarships, and boarding allowance up to £30 per annum is provided where necessary. Evening continuation classes were attended at 21 centres in 1924 by about 2,700 pupils. The classes are intended to provide some measure of higher education to those who leave school as soon as they reach the compulsory age of 14 years. Admission to these classes is free, but pupils must attend regularly three evenings a week. A scheme of carefully compiled correspondence lessons with the object of giving some measure of secondary education to suitable scholars in scattered country areas has also been arranged (see 4, 1 ante).

Fifty scholarships tenable for 3 years (with possibility of extension to 5 years) at approved secondary schools are annually offered for boys and girls attending Government or other efficient schools. The scholarships entitle the holders to receive a grant for books and travelling expenses. Boarding allowance up to £30 per annum may also be granted where necessary. Scholarships to enable children from country districts to attend at District High Schools or the Narrogin School of Agriculture were inaugurated in 1917. Only those children who must live away from home are eligible, and the tenure may in some cases be extended to 5 years. The scholarships carry an allowance of £30 per annum. During 1924, 47 District High School Scholarships and 9 tenable at the Narrogin School of Agriculture were awarded. Twenty scholarships are also awarded to children of fallen or disabled soldiers. The scholarships are tenable for 3 years, renewable for a further term of 2 years, and, where necessary, carry an allowance of £30 per annum. Two scholarships at the University are offered on the results of the school leaving examination.

(*f*) *Tasmania.* The enrolment and average attendance at the High Schools in 1924 were 738 and 701 respectively. These provide for five classes of pupils—(i) Those who desire to become teachers; (ii) University students; (iii) Commercial; (iv) Mechanics; (v) Home duties (girls). The full secondary course covers five years. Under the Bursaries Act of 1915, five junior city bursaries tenable for three years at a State or registered secondary school and carrying allowances up to £16 were awarded, also seventeen junior bursaries for country children with allowances up to £46, and six for children in country schools of the fourth to seventh class with allowances up to £46 tenable for three years. The Bursaries Board awarded 12 junior city bursaries, 8 junior country bursaries, 12 senior city bursaries, and 7 senior country bursaries in 1924.

(*g*) *Northern Territory.* A small number of pupils is in receipt of secondary instruction at the Darwin High School, the enrolment for 1924 amounting to 13.

(vi) *Agricultural Training in State Schools.* (*a*) *New South Wales.* During 1921 the whole subject of agricultural education was revised, and, under a Supervisor of Agriculture, a definite course of scientific and practical instruction was evolved. This course is now being taken at the residential schools at Hurlstone and Yanco, and it is proposed to establish similar schools in other parts of the State. The necessary number of teachers to initiate the work has been provided, and students will be trained at the University to meet future requirements. Rural Schools, giving a course in elementary agriculture, nature study, and farm mechanics for boys, and domestic science and horticulture for girls were established in 1923. In 1924 the rural course was in operation in 12 country schools. The course extends over three years, and includes such subjects as elementary agriculture, applied farm mechanics, and rural economics in the case of boys, while the girl pupils receive training in domestic science and horticulture. A model farm, varying in extent from 1 to 5 acres, is attached to each school. Average attendance at these schools in 1924 was 640.

(*b*) *Victoria.* In Victoria, Agricultural High Schools have been established in various country centres. Pupils must be at least fourteen years of age, and have passed beyond the curriculum of the elementary school, or else be able to afford satisfactory proof that they are qualified to profit by the instruction offered. The schools are practically secondary schools with an agricultural bias, and form a link between the rural school and the agricultural college. They are also used as a preliminary stage in the education of boys and girls who wish to become teachers and eventually graduate in the State Training College and the University. At some of the schools short courses in agriculture have been instituted for farmers' sons who have left school. A local council is appointed for each school, and exercises a general oversight over its operations. The experimental plots at these schools have aroused much interest among the farmers from the surrounding districts. A Supervisor of Agriculture reports and gives advice on the teaching of agriculture in the State Schools. A fair number of teachers has gained diplomas in agriculture, and is capable of giving practical instruction at the High Schools. Schools of Agriculture are conducted by the Agricultural Department at the State Research Farm, Werribee. Teachers in the wheat-growing districts are also instructed for short periods by the organizing Inspector of Agriculture at the University, and their services are utilized as leaders or group supervisors in their districts. The elementary principles of agriculture are taught in a large number of State Schools, and progress has been made in the direction of establishing agricultural clubs and home-project organizations. Experimental work at the Moriac School proved to the residents in the locality that onion-growing was a payable proposition. A Horticultural Society has been established, with a number of schools in affiliation, while practical help in school gardening is afforded by the departmental supervisor. The Society has a nursery and distributing centre for plants and seeds at Oakleigh, and sub-nurseries have been established at various schools. Recently an officer has been detailed to promote the establishment of school plantations on blocks adjacent to school properties, the subsequent care of the trees, etc., to be undertaken by the pupils.

(*c*) *Queensland.* In Queensland the Government provides a small grant to encourage the study of agriculture, horticulture, and kindred subjects in the State Schools, while a departmental teacher of agriculture visits the schools and gives assistance in agricultural, horticultural, and nature study work. Excellent experimental work has been carried out at some of the schools, and gardens have been established wherever circumstances permitted. Cotton culture was undertaken by some hundreds of schools, in many cases, with marked success, the product being harvested and sold at a satisfactory price. Several of the schools, with their surroundings of well-grown shade and ornamental trees, make attractive spots in the country landscape. In some cases forestry work has been taken up by schools, and, with the aid of the Forestry Department, it is proposed where feasible to plant school reserves with commercial timbers. Short courses of instruction for teachers have been instituted at the Gatton College. This institution was placed under the control of the Education Department in September, 1923, and was re-organized so as to include an Agricultural High School, which, in addition to ordinary secondary education, will provide graded courses in agriculture. Provision has also been made for non-resident students, and vacation courses have been arranged for State School teachers. A large number of teachers has gained a practical knowledge of milk and cream testing and dairy farming methods generally, and the subject is now added to the programme of instruction in several of the dairying districts. The practical advice and help given has resulted in many instances in marked improvement in the dairy herds. A Tractor School for farmers was carried on during 1924, and organized instruction in irrigated culture has been undertaken. At Nambour, a Rural School, the first of its type, was opened early in 1917. In addition to the ordinary subjects of the curriculum this school provides for instruction in farming, fruit growing, dairying, etc., with dressmaking, millinery and cookery for girls, and woodwork, leatherwork, and tinsmithing for boys. Training in business methods, shorthand and typewriting is also available. Supplies of trees for distribution to other schools are raised at Nambour, and many schools distribute trees and plants for home planting. In view of the success of this institution, schools of somewhat similar type have been established at Boonah, Marburg, Home Hill, and Clifton, and it is proposed to open others at Gordonvale, Murgon, Gayndah, Imbil, and Beenleigh. A new feature of the year's work in 1923 was the successful inauguration of " home project " schemes, whereby subjects of practical agricultural interest are studied out of school hours.

(*d*) *South Australia.* In South Australia the Public Schools' Floral and Industrial Society, founded in 1880, holds annual exhibitions of school work from all parts of the State. In addition, it has for some years undertaken the distribution of flower seeds among school children at a very cheap rate, and has thus fostered the love of horticulture. A special instructor has been appointed to give assistance to teachers desirous of making their school gardens aid in nature study work. Assistance is given by personal visits as well as by correspondence, and by instruction at vacation Summer Schools. Teachers in training receive instruction in nature knowledge and the art of conducting nature studies. A seed wheat competition amongst school children inaugurated in 1911 proved very successful, a second, which was commenced in 1916, concluded in 1920, and a third in 1921. In 1919 two of the competitors who entered on the work of wheat-breeding produced wheat of such quality that they were unable to supply the orders for seed grain received from South Australia, as well as from other States. Milk-testing is carried out in several schools, and the agricultural training generally is greatly helped by the practical co-operation of the farmers. In 1923 and 1924 Forest Camp Schools were held during the summer and autumn months in the Kuitpo forest, the scholars receiving practical training in forestry and allied subjects. At Murray Bridge the High School course includes agriculture and dairying.

(*e*) *Western Australia.* In Western Australia an advisory teacher of nature study visits the schools and gives advice in regard to proper methods in horticulture and experimental agricultural work. The number and usefulness of the gardens and experimental plots attached to State Schools show marked improvement each year. Special attention is being given to the needs of the country schools, and as far as possible the instruction is given a practical bias. In some districts definite projects are undertaken of importance to a rural community, i.e., vegetable growing, bee-keeping, and pig and poultry-keeping. The boys are also trained in useful manual work, and the girls, wherever possible, are taught simple cookery, and the drying and preserving of fruit and vegetables. Forty special rural schools have been established in different parts of the State, and the project system has as far as possible been made portion of the curriculum. Early in 1914 a school was opened on the Narrogin State Farm. The pupils are taken directly from the primary schools, and the course of instruction lasts for two years. On its completion students are qualified to enter on the diploma course at the University. The school was brought under the control of the Education Department in 1921, and has so justified its existence that it cannot accommodate all the applicants for admission. During 1924 there were 70 students. Provision has been made for practical work in agriculture at the High School at Northam, and, by arrangement, some of the pupils spend a portion of their time each year at the State Experimental Farm at Merredin. The Education Department is also interesting itself in finding employment on farms for town boys who have difficulty in obtaining employment at home.

(*f*) *Tasmania.* In Tasmania the organizing teacher of nature study visits and advises the teachers at the State Schools, and also gives addresses and model lessons at the schools of instruction. During 1924 a beginning was made with the work of giving agricultural teaching at selected primary schools, and if the results justify it the system will be extended as opportunity offers. Considerable success has attended the establishment of classes in Hobart for instruction in apple-grading and packing, and similar classes have been formed at several other centres.

5. **Teachers.**—The distribution of the teaching staff in the State Schools during the year 1924, including teachers of needlework, was as follows :—

STATE SCHOOLS.—TEACHING STAFF, 1924.

State.	Principal Teachers.		Assistants.		Pupil or Junior Teachers.		Sewing Mistresses.	Total.		
	Males.	Fem.	Males.	Fem.	Males.	Fem.		Males.	Fem.	Total.
New South Wales	2,345	1,191	1,965	4,695	..	..	204	4,310	6,090	10,400
Victoria	1,547	1,149	696	2,006	417	1,531	387	2,660	5,073	7,733
Queensland ..	1,013	683	564	1,399	152	230	..	1,729	2,312	4,041
South Australia ..	490	539	343	979	117	210	143	950	1,871	2,821
Western Australia	446	417	196	708	24	158	110	666	1,393	2,059
Tasmania ..	203	314	67	353	44	221	3	314	891	1,205
Northern Territory	4	6	..	1	..	1	..	4	8	12
Total ..	6,048	4,299	3,831	10,141	754	2,351	847	10,633	17,638	28,271

The figures for principal teachers include mistresses of departments, while students in training colleges have been grouped with assistants. Some of the teachers in sole charge of small schools have had very little training, but future permanent appointments will be confined as far as possible to those who have gone through a regular course of instruction.

It will be observed that there is a fairly large number of junior teachers, or pupil teachers, as they are called in some of the States. The pupil teachers will, however, in time disappear, and their places will be filled by young people who have undergone a course of training in schools specially provided for the purpose. Allusion to the methods of training will be found in the next sub-section.

In New South Wales and in some of the other States attention has recently been drawn to the difficulty of securing an adequate supply of teachers, particularly male teachers for small schools in out-back districts. Difficulty is also experienced in some of the States in securing suitable living accommodation for teachers of these small schools.

6. **Training Colleges.**—The development of the training systems of the various States has been alluded to at some length in earlier issues of the Year Book. The present position is as follows :—

(i) *New South Wales.* At the end of 1924 the total number of students in training was 891 (351 men and 540 women), of whom 279 were taking the twelve months' course for rural teachers or assistants, and the balance the various courses up to five years, and the special courses arranged in accordance with departmental requirements. Practically all accessible metropolitan schools are used as practice schools for giving training-college students opportunity to acquire practical skill in teaching. Formerly the limits of accommodation at the College were responsible for the employment in the schools of a number of untrained juniors, but during recent years teachers entering the service have at least six months' professional training. At present some difficulty is experienced owing to the necessity for holding classes in three separate buildings some distance apart, but this will disappear with the completion of the new buildings within the University grounds. The Principal of the College is also Professor of Education at the University. Coupled with its educational research the College issues a scientific educational periodical written almost exclusively by the staff, while members of the staff are from time to time afforded opportunities of visiting foreign countries on study leave. In addition to the help and advice afforded by the inspectorial staff, teachers in rural districts receive the advantage of tuition by lectures and correspondence from members of the Training College staff. The Department also arranges for schools of instruction in various subjects during vacations.

(ii) *Victoria.* During recent years the educational and professional attainments of the general body of teachers in Victoria have greatly improved. Prior to the establishment of the High Schools, the pupil or junior teachers were recruited from the ranks of those who had obtained the Merit Certificate in the eighth grade of the elementary schools, and the acquirement of the necessary literary qualifications for promotion was greatly hindered by the circumstance that they were engaged in teaching for the greater portion of the day. Under present conditions, candidates spend at least two years in a High School, and consequently enter on their professional duties with a better mental and physical equipment. A number of High School pupils after serving as junior teachers for a year are awarded studentships at the Training College. The present Training College dates back to 1874, but during the retrenchment period, viz., from 1893 to 1900, it was closed. The institution was reopened in February, 1900, with an enrolment of 57 students. At the close of 1924 the students in training numbered 285, of whom 183 were women. In addition to the correspondence courses and the Saturday and evening classes, classes were conducted for private kindergarten students, and for students of manual and domestic arts, so that altogether over 500 students were in receipt of instruction. The students at the Hostel receive training in domestic economy. Several practising schools are attached to the Training College, and infant rooms with attached kindergartens have been specially equipped for the training of infant teachers. The University High School gives secondary teaching practice to both departmental and private students. Three courses of training are provided for at the College, i.e., for kindergarten or infant teachers, for primary teachers, and for secondary teachers. Teachers are also greatly helped by district Conferences, and by special training at the Vacation Schools. Excellent results have been attained at the psychological laboratory attached to the Training College.

(iii) *Queensland.* The great majority of the teachers in Queensland originated in the pupil-teacher system, under which beginners, at the age of fourteen or thereabouts, were selected from the senior classes of the primary schools and placed in charge of classes, their efforts being to some extent supervised by the head teachers or senior assistants. In addition to the strain involved in teaching, the neophytes had to prepare notes of lessons, and to study for the annual examinations. During recent years, however, the juniors have been largely recruited from the secondary schools, and their more advanced physical and mental development renders them better fitted for their duties. At the end of 1924 there were 119 of these apprentice-teachers employed. Arrangements have been made to increase the number as early as possible, and in order to attract candidates of a suitable type, teacher-scholarships are granted in accordance with the following scheme—(*a*) Thirty senior scholarships (20 for males and 10 for females) to candidates who obtain the highest " approved " passes at the University Senior Examination. These scholarships entitle holders to receive free professional tuition at the Training College to enable them to complete their classification examination, together with prescribed living allowances. At the conclusion of their course the student teachers may be appointed teachers in Class III., Division 6. (*b*) Sixty junior scholarships (40 for males and 20 for females), with a currency of two and a half years, are given to candidates who have obtained approved passes at the University Junior Examination. At the end of their course these students are admitted as classified teachers in Class III., Division 8. (*c*) Positions as student-teachers in local State schools are offered to 33 boys and 20 girls who have attended secondary schools. The period of training extends over two and a half years, during which they are trained by their respective head teachers. Living allowances are granted, and at the end of their term the students are expected to satisfy the requirements of the Class III. Teachers' Examination.

At the Training College, which was opened in 1914, the activities comprise—(*a*) training of teacher-scholarship holders; (*b*) short courses of training for unclassified teachers selected from small country schools; (*c*) tutorial classes and correspondence tuition courses to assist students preparing for departmental examinations or for matriculation. During 1924 the number of students under training or tuition was 394, comprising 2 university students, 15 senior and 57 junior scholarship holders, 63 teachers at evening classes, 39 short course students, and 218 teachers receiving tuition by correspondence. In addition, 102 students, principally public servants, were receiving tuition at evening classes.

(iv) *South Australia.* In preceding Year Books a brief account was given of the scheme of training for teachers introduced in 1920. (See No. 17, p. 461.) The total number of students in attendance at the Training College during 1924 was 328. Practical work in teaching is carried out at selected schools for the various types of teachers. In order to provide an adequate supply of qualified students, provision is made for the award of 150 scholarships annually, tenable at a High School. These scholarships entitle the holder to one or two years' education at a High School beyond the Junior Public stage, with an allowance of £40 per annum for boys and £30 for girls, and a boarding allowance of £20 per annum if students live away from home. Special evening or Saturday morning classes of instruction are held by the inspectors in their districts, particular attention being devoted to the interests of the rural teacher.

(v) *Western Australia.* A Training College for teachers was opened at Claremont in 1902. The original building provided accommodation for 60 students, but extensions were opened in 1908 and the number in training in 1924 was 210. Of the long-course students, 41 were in the first year, and 37 in the second year, while 19 were taking the special course for graduates and third year students. The remaining 113 were taking the one year's course for teachers of country schools. A fair proportion of the full-course students attend lectures at the University, and some remain for a third or fourth year to complete degree work. In addition to the ordinary schools at which teachers gain professional experience, special practising schoools have been established for the proper training in teaching and managing the smaller country schools. The standard for entry into the teaching profession has been considerably raised during recent years. Formerly young people were taken at the age of fourteen years from the primary schools and appointed as "pupil" teachers. At present the probationary teachers or monitors must be seventeen years of age, and are expected to possess a good secondary education. After a short period of probation they enter the Training College for special professional training. University graduates receive a special course of one year's duration. Untrained applicants are appointed only when the supply of trained teachers is insufficient. The teachers in the metropolis are greatly helped by periodical conferences of inspectors and teachers, while in rural areas demonstration lessons are given by inspectors at convenient centres. Teachers in isolated areas are assisted by the correspondence classes.

(vi) *Tasmania.* During 1917 the scheme for the training of teachers was recast and grouped in four divisions :—(1) A short course to supply the professional training required for the less important positions in the primary schools and for teachers of the smaller provisional and Sixth Class schools; (2) Training of infant teachers; (3) Training for positions in the larger primary schools; (4) Training of high school teachers. Practical training for the various classes is given in well-equipped practising schools and in model small schools. The inspectors hold schools of instruction for teachers of small schools, and teachers of moderate attainments are also helped by the Correspondence School. The enrolment at the Training College in 1924 numbered 70.

7. **Expenditure.**—(i) *Maintenance—All Schools.* The net expenditure on maintenance in all grades of schools, excepting technical schools, and the cost per head of average attendance, for the five years ended 1924 are shown below. The figures do not include expenditure on buildings, which is given separately in a subsequent table.

STATE SCHOOLS.—EXPENDITURE ON MAINTENANCE, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
				TOTAL.				
	£	£	£	£	£	£	£	£
1920	2,668,060	1,325,149	1,103,041	403,768	394,931	182,822	2,763	6,080,534
1921	3,227,245	1,615,882	1,210,592	452,364	464,136	230,131	2,607	7,202,957
1922	3,234,549	1,759,692	1,186,537	444,373	521,110	239,117	2,943	7,388,321
1923	3,185,085	1,814,185	1,200,636	491,341	526,739	225,261	3,463	7,446,710
1924	3,296,669	1,859,809	1,264,005	538,744	543,395	240,787	4,015	7,747,424
				PER HEAD OF AVERAGE ATTENDANCE.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1920	11 7 5	7 15 6	11 7 7	6 11 0	8 15 0	7 3 5	12 1 4	9 11 8
1921	12 16 9	8 19 5	11 18 1	7 1 9	10 2 11	8 16 0	10 12 11	10 15 4
1922	12 11 3	9 8 8	11 10 10	6 15 0	10 16 1	8 16 1	15 16 5	10 14 8
1923	12 7 1	9 17 9	11 9 1	7 7 4	10 17 0	8 12 0	18 18 6	10 17 4
1924	12 5 6	9 16 10	11 16 7	7 16 8	11 5 0	8 19 0	19 6 1	10 19 6

The growth in cost of maintenance in 1924 as compared with 1920 has been brought about by the higher salaries and allowances paid to teachers, and the increased expenditure in connexion with the supply of materials and equipment.

The figures for Queensland include expenditure in connexion with State scholarship holders at Grammar Schools and other approved secondary institutions, allowance being made for the number of these pupils in arriving at the cost per head of attendance.

(ii) *Maintenance—Secondary Schools.* The figures given in the preceding table refer to expenditure on maintenance of all State primary and secondary schools, exclusive of technical colleges. It has been thought desirable by the State Education Departments to give separate information in regard to the cost of secondary education. Any satisfactory estimate of this nature is, however, rendered difficult by the circumstance that there is no exactly comparable definition of the term "secondary" as applied in the various States, while difficulties arise in connexion with the correct apportionment amongst the various branches of expenses of administration, inspection, and the training of teachers. A further complication is caused by the fact that both elementary and higher education are in some instances given in the same school and by the same teacher. The figures quoted in regard to cost hereunder have been extracted from the Reports of the State Education Departments, and are subject to the qualifications above enumerated.

STATE SECONDARY SCHOOLS.—EXPENDITURE ON MAINTENANCE, 1924.

State.	Cost.	Cost Per Head of Population.
	£	s. d.
New South Wales	360,361	3 3
Victoria	192,631	2 4
Queensland	92,080	2 3
South Australia	63,330	2 4
Western Australia	99,880	5 8
Tasmania	14,820	1 5

The figures in all cases are exclusive of cost of buildings.

(iii) *Buildings.* Expenditure on school buildings in each of the years quoted was as follows :—

STATE SCHOOLS.—EXPENDITURE ON BUILDINGS, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
	£	£	£	£	£	£	£	£
1920	370,412	131,266	138,985	28,907	26,851	19,406	..	715,827
1921	293,420	176,099	67,490	64,885	70,533	53,059	..	725,486
1922	464,015	349,562	83,754	70,506	81,773	31,329	..	1,080,939
1923	628,592	481,372	93,760	85,024	55,173	12,751	..	1,356,672
1924	766,019	531,571	157,683	107,466	71,634	20,643	184	1,655,200

The large increases in expenditure shown in most instances during the last two years were due to the efforts made to overtake arrears in necessary buildings and repairs.

(iv) *Total.* The net total cost during the year 1924 was as follows :—

STATE SCHOOLS.—NET TOTAL COST, 1924.

Item.	N.S.W.	Victoria.	Q'land.	S. Aust.	W Aust.	Tasmania.	Nor. Ter.	Total.
	£	£	£	£	£	£	£	£
Net cost of education, including buildings ..	4,062,688	2,391,380	1,421,688	646,210	615,029	261,430	4,199	9,402,624

The figures in this and the preceding tables refer to all grades of State schools (with the exception of technical schools), and include evening schools. Including buildings, the net cost per scholar in average attendance for the whole of the State schools in Australia amounted in 1924 to £13 6s. 4d., as compared with £4 9s. 3d. in 1901.

8. **School Savings Banks.**—Returns show that these institutions are in existence in four States. In New South Wales, there were 885 banks at the end of 1924, the deposits amounting to £62,182 and withdrawals to £66,696. Since the establishment of the banks in 1887, deposits totalled £1,011,918, and withdrawals £999,855. Of the latter sum the withdrawals of accounts of £1 and upwards for deposit in the Government Savings Bank as children's individual accounts amounted to £187,208. In Victoria banks were in operation at 1,473 schools at the end of 1925. On the 30th June deposits amounted to £73,574 and withdrawals to £31,911. Since the inauguration of the school bank system in 1912 the total deposits reached £241,612, and the withdrawals £127,376. In South Australia, there were 44,220 depositors, with £62,986 to their credit; and in Western Australia, there were 616 school banks, with 44,837 depositors and £74,443 to their credit.

§ 3. Private Schools.*

1. **Returns for 1924.**—The following table shows the number of private schools, together with the teachers engaged therein, and the enrolment and average attendance in 1924 :—

PRIVATE SCHOOLS, 1924.

State.	Schools.	Teachers.	Enrolment.	Average Attendance.
New South Wales	693	4,200	98,801	67,724
Victoria	490	2,163	64,265	(*a*) 54,600
Queensland	186	1,155	31,411	24,991
South Australia	180	865	16,542	12,819
Western Australia	117	508	11,336	10,090
Tasmania	73	324	7,106	5,319
Northern Territory	1	4	82	71
Total	1,740	9,219	229,543	175,614

(*a*) Estimated.

The totals for New South Wales include returns from the Sydney Grammar School, which receives a yearly State subsidy of £1,500, and which, in 1924, had an enrolment of 650, and an average attendance of 575.

The figures for Queensland include the returns from Grammar Schools, of which there are ten—six for boys and four for girls, with an enrolment of 1,261 boys and 793 girls. These schools are governed by boards of trustees, partly nominated by Government, and partly by the subscribers to the funds. The trustees make regulations regarding the fees of scholars, the salaries of teachers, and generally for the management of the schools. The total Government aid received in 1924 amounted to £17,800. In addition, a sum of £15,029 was received for Government scholarships and bursars' fees. The Grammar Schools are inspected annually by officers of the Department of Public Instruction.

2. **Growth of Private Schools.**—The enrolment and average attendance at private schools during 1891, 1901, 1911, and in each year of the period 1920 to 1924 are as follows :—

PRIVATE SCHOOLS.—ENROLMENT AND ATTENDANCE, 1891 TO 1924.

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891	124,485	99,588	1921	198,688	164,073
1901	148,659	120,742	1922	201,574	167,362
1911	160,794	132,588	1923	206,910	169,466
1920	192,093	156,083	1924	229,543	175,614

The comparatively small rate of increase in private school enrolment and attendance is due in large measure to the development of the State educational systems, especially as regards the provision of secondary education.

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* Private schools include all schools not wholly under State control. The term "private," though popularly applied, is, of course, a misnomer.

3. **Registration of Private Schools.**—Conditions in regard to the registration of private schools were alluded to in previous Year Books (*vide* No. 18, p. 451), but consideration of space precludes the repetition of this information in the present issue.

§ 4. Free Kindergartens.

The following information regarding Free Kindergartens has been compiled from particulars supplied by the principals of the chief institutions or the organizing secretary in each State, except in the case of Western Australia, the details for which were furnished by the Education Department.

FREE KINDERGARTENS, 1924.

State.	No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.	Voluntary Assistance.
New South Wales (Sydney)	15	726	27	78	47
Victoria (Melbourne) ..	25	1,508	66	28	407
(Ballarat) ..	1	33	1	..	15
Queensland (Brisbane) ..	6	584	7	16	9
South Australia (Adelaide)	7	220	2	8	..
Western Australia (Perth)	5	207	8	25	8
Tasmania (Hobart) ..	4	134	5	13	..
(Launceston) ..	2	81	3	4	..
Total	65	3,493	119	172	486

In New South Wales there were 73 students at the Kindergarten Training College. At the Melbourne College, 28 students were in training. The Brisbane Training College had 16 students in training during 1924, the Training College at Adelaide 17, and at Perth 25. There is no training college at Hobart, but the free kindergartens are used as practising schools in connexion with the Kindergarten Association. Thirteen students were in training during 1925.

The information given above refers to institutions under private kindergarten unions or associations, and is exclusive of the kindergarten branches in the Government schools of the various States.

§ 5. Universities.

1. **Origin and Development.**—(i) *University of Sydney.* The Act of Incorporation of the University of Sydney received Royal Assent on the 1st October, 1850, and the first Senate was appointed on the 24th December of that year. The first matriculation examination was held in October, 1852, when 24 candidates passed the required test, and the formal inauguration ceremony took place on the 11th October of the same year. A Royal Charter was granted to the University on the 27th February, 1858. Women students were admitted in 1881. The passing of the University (Amendment) Act of 1912 marks an important epoch in the development of the educational system of New South Wales. The Act aims at placing the University in a more effective position as the culminating point in a thoroughly co-ordinated system of State education, and it is claimed that the passing of this measure made the educational system—from the Primary Schools through the Secondary Schools to the Technical Colleges or to the University—form a progressive and continuous whole. More extended reference to this Act and to the liberal scheme of exhibitions provided thereunder for scholars from the State and Private Schools was given in Official Year Book No. 15, page 745. At the inception of the University there were only three professorships. The present staff consists of 32 professors, 6 associate and 5 assistant professors, and 160 lecturers and demonstrators. There are, in addition, 17 honorary lecturers.

(ii) *University of Melbourne.* This institution was established by Act of Parliament assented to on the 22nd January, 1853, and its first council was appointed on the 11th April of that year. The foundation stone of the main building was laid on the 3rd July, 1854, and the University was formally inaugurated on the 13th April, 1855. By Royal Letters Patent, issued in 1859, its degrees are, like those of the Sydney institution, declared of equal status with those of any other University in the British Empire. Women students were admitted to degree courses for the first time in 1880. The University, which began in 1855 with schools of Arts and Law, has now a staff of 20 professors, 4 associate professors, 134 lecturers and demonstrators, and 131 various assistants. The Conservatorium of Music has a staff numbering 46.

(iii) *University of Queensland.* The Act to establish the University of Queensland was passed in 1909, and the first Senate was appointed on the 14th April, 1910. The University was opened on the 14th March, 1911, when 60 students were matriculated. Provision has been made for a Correspondence Study department in connexion with the institution, and at the request of the Brisbane branch of the Workers' Educational Association weekly lectures are given in History and Economics. At the present time there are 11 professors, with 18 independent lecturers, 3 assistant lecturers and demonstrators, and 20 miscellaneous assistants.

(iv) *University of Adelaide.* This University was established by Act of Parliament in 1874. Its origin and progress were largely due to the munificence of the late Sir Walter Watson Hughes and Sir Thomas Elder, G.C.M.G., the total gifts of the latter amounting to over £100,000. The academical work of the institution was commenced in March, 1876, when 8 matriculated and 52 non-graduating students attended lectures. The foundation stone of the University buildings was laid on the 30th July, 1879, and the buildings were opened in April, 1882. In 1881, by Royal Letters Patent, the degrees granted by the institution were recognized as of equal distinction with those of any University in the British Empire. The Elder Conservatorium of Music was opened in 1898. Power was given by Act of Parliament in 1880 to grant degrees to women. At first there were only four professorships in the University, whereas the present staff consists of 18 professors, 119 lecturers and demonstrators, and 55 miscellaneous assistants, while the staff at the Conservatorium, not included in the foregoing figures, numbers 19.

(v) *University of Western Australia.* The University of Western Australia was established under an Act which received Royal assent on the 16th February, 1911, and the first Senate was appointed on the 13th February, 1912. The University was opened in March, 1913. There are now 7 professors, in addition to 27 lecturers and demonstrators and 17 miscellaneous assistants. The Chair of Agriculture was endowed by Sir Winthrop Hackett. Associates of the Perth Technical School or the Kalgoorlie School of Mines may, under prescribed conditions, obtain a reduction in period of attendance for the B.E. degree, and students from the School of Mines may be admitted to the examinations and take portion of their course at the University.

(vi) *University of Tasmania.* The Act to establish the University of Tasmania (Hobart) was assented to on the 5th December, 1889. At the present time the institution, which is small but efficient, possesses a staff of 7 professors, 13 independent lecturers, and 6 assistant lecturers and 2 miscellaneous assistants. Under Statutes the Zeehan School of Mines and Metallurgy and the School of Mines and Industries at Mount Lyell were affiliated to the University.

2. **Teachers and Students.**—The following table shows the number of professors and lecturers, and the students in attendance at each of the State Universities during the year 1924:—

UNIVERSITIES.—TEACHERS AND STUDENTS, 1924.

University.	Professors.	Lecturers and Demonstrators.	Students attending Lectures.		
			Matriculated.	Non-matriculated.	Total.
Sydney	43	177	2,189	499	2,688
Melbourne	24	134	..	..	2,197(a)
Queensland (Brisbane) ..	11	21	310	137	447
Adelaide	18	119	818	635	1,453(b)
Western Australia (Perth) ..	7	27	372	5	377
Tasmania (Hobart)	7	19	145	31	176

(a) Exclusive of 226 music students. (b) Exclusive of 564 music students.

Students at the Conservatorium of Music have been excluded in the case of Melbourne and Adelaide. The Conservatorium in Sydney, while attached to the Education Department, is not under the control of the University.

3. University Revenue.—The income of the Universities from all sources during the year 1924 was as follows :—

UNIVERSITIES.—REVENUE, 1924.

University.	Government Grants.	Fees.	Private Foundations.	Other.	Total.
	£	£	£	£	£
Sydney	125,153	41,631	83,928	5,176	255,888
Melbourne	63,642	73,600	9,863	24,105	171,210
Queensland (Brisbane) ..	22,300	8,492	17,623	736	49,151
Adelaide	39,618	22,524	12,513	589	75,244
Western Australia (Perth)	17,750	1,554	2,002	2,161	23,467
Tasmania (Hobart) ..	12,860	2,997	1,456	160	17,473
Total ..	281,323	150,798	127,385	32,927	592,433

The extent to which the older-established Universities have benefited by private munificence will be apparent from the following table. The amounts quoted represent actual cash received, special mention being made of individual gifts of £5,000 and over :—

UNIVERSITIES.—BENEFACTIONS.

University of Sydney.		University of Melbourne.		University of Adelaide.	
Donor.	Amount.	Donor.	Amount.	Donor.	Amount.
	£		£		£
J. H. Challis ..	276,750	Sir Samuel Gillott ..	34,400	Sir Thos. Elder ..	98,760
Sir P. N. Russell ..	100,000	Sir Samuel Wilson ..	30,000	The Hon. Sir Langdon Bonython	40,000
Thos. Fisher ..	30,000	James Stewart ..	25,624	Mrs. Jane Marks	30,000
W. O. Watt ..	15,103	Hon. Francis Ormond	20,000	R. Barr Smith and family ..	21,150
Miss Elizabeth Caird	9,576	John Hastie ..	19,140	Sir W. Hughes ..	20,000
Sir Hugh Dixson ..	9,050	Robert Dixson ..	10,837	Family of John Darling ..	15,000
Edwin Dalton ..	8,000	Sir J. M. and Lady Higgins	9,700	Mrs. G. A. Jury	12,000
J. F. Archibald ..	7,135	John Dixon Wyselaskie	8,400	Hon. J. H. Angas	10,000
Hon. Sir W. Macleay	6,221	Mrs. E. R. Moran ..	7,000	Other donations	33,544
Mrs. Hovell ..	6,000	David Kay ..	5,764		
Thos. Walker ..	6,200	Cuming Smith & Co. Ltd.	5,250		
Mrs. M. H. Dalley ..	5,000	Subscribers, Ormond Exhibitions in Music	5,217		
Other donations ..	69,438	Mr. and Mrs. F. Knight	5,000		
		Henry T. Dwight ..	5,000		
		Wm. Thos. Mollison	5,000		
		Other donations ..	96,478		
Total ..	548,473	Total	292,810	Total ..	280,454

The figures for the Sydney University are exclusive of the bequest by the late Hon. Sir Samuel McCaughey, M.L.C., of property producing an annual income of £19,000 to be applied to the general purposes of the University. In addition to the sum of £6,000 shown above, the Hon. Sir W. Macleay also presented the Museum of Natural History to the University of Sydney. The column " Other Donations " for Melbourne University includes portion of the sum of £49,000 raised by special appeal in 1920.

The credit balances of some of the above endowments now amount to very considerable sums. For example, on the 31st December, 1924, the Challis Fund amounted to nearly £333,000, while in the case of Melbourne University the Stewart Fund on the 31st December, 1924, stood at £30,900, and the Dixson Fund at £16,600.

In addition to the above there were various other bequests to Sydney University—e.g., collection of Egyptian antiquities, etc., by Sir Charles Nicholson, and Natural History collection by Mr. Geo. Masters, while the building for the Natural History Museum was given by Sir W. Macleay. Numerous prizes and scholarships have also been given to the various colleges. In Melbourne, the Hon. Francis Ormond's benefactions to Ormond College amounted to about £108,000. Private benefactions to the University of Queensland amounted in 1924 to £90,000, of which £45,200 was received from the trustees of the late Sir Samuel McCaughey and £9,800 from the Walter and Eliza Hall Trust. A gift of £10,000 was received from the British Red Cross Association in 1920, and a similar sum was presented in 1923 by Miss Kate Garrick. With a view to advancing the cause of education in agriculture, forestry and allied subjects, Mr. Peter Waite transferred to the Adelaide University in 1914 the whole of the valuable Urrbrae estate at Glen Osmond. The estate comprises 134 acres of land with a fine mansion. In 1915, he presented the estate of Claremont and part of Netherby, comprising 165 acres, adjoining Urrbrae, while in 1918 he transferred to the University 5,880 shares in a public company to provide funds to enable the University to utilize the land for the purposes intended. In addition to the sum of £30,000 mentioned above, presented by Mrs. Jane Marks in 1922, Adelaide University benefited during the year by a gift of property valued at £20,000, presented by Mrs. A. M. Simpson and Miss A. F. Keith Sheridan. In Western Australia the Chair of Agriculture was founded by an endowment of Sir Winthrop Hackett, first Chancellor of the University, and a sum of £19,450 was received from this endowment in 1923. Private benefactions to the University of Tasmania amount to about £6,800.

4. **University Expenditure.**—For the year 1924 the expenditure by the Universities under various headings was as follows :—

UNIVERSITIES.—EXPENDITURE, 1924.

University.	Salaries and Administration.	Scholarships, Bursaries, etc.	General Maintenance.	Buildings and Grounds.	Other.	Total.
	£	£	£	£	£	£
Sydney	128,269	5,966	36,549	105,909	474	277,167
Melbourne	96,272	9,372	9,092	16,045	(*a*)26,920	157,701
Queensland (Brisbane) ..	23,787	3,381	6,632	266	(*b*) 9,398	43,464
Adelaide	49,964	958	173	(*d*)5,686	(*c*) 14,570	71,351
Western Australia (Perth)	19,508	385	..	50	(*e*) 4,010	23,953
Tasmania (Hobart) ..	11,658	636	979	(*f*) ..	3,460	16,733
Total	329,458	20,698	53,425	127,956	58,832	590,369

(*a*) Includes £11,887 laboratory and research expenditure. (*b*) Includes £3,009 laboratory and research. (*c*) Includes £5,152 laboratory and research. (*d*) Exclusive of £15,892 Government expenditure from loans. (*e*) Includes £1,859 laboratory and research. (*f*) Included in General Maintenance.

5. **University Extension.**—Extension lectures were instituted at Sydney University in 1886, and in 1892 a Board was appointed which receives and considers applications from country centres, and makes provision for engaging lecturers and managing the entire business connected with the various courses. The Board also arranges for courses

of lectures in other States. In 1924 provision was made for 18 courses, the lectures being given in part at the University, and in part in various suburban and country districts.

Evening tutorial classes open to both matriculated and unmatriculated students have been established in various centres in accordance with the University Amendment Act of 1912. Fifty-eight of these classes, attended by about 1,500 students, were in operation during 1924. Thirty-seven of the classes were held in the metropolitan area, and 21 in country districts.

University extension lectures in Victoria date from the year 1891, when a Board was appointed by the Melbourne University for the purpose of appointing lecturers and holding classes and examinations at such places and in such subjects as it might think fit. A joint committee composed of representatives from the Extension Board and the Workers' Educational Association respectively controls the organization of tutorial classes. The Board also arranges for advising country students by correspondence on social and cultural subjects. The tutorial classes during the year numbered 23, of which 10 were held in Melbourne, 8 in the suburbs, and 5 in country towns, the combined attendance reaching 800. In addition, about 300 students were receiving tuition by correspondence. A Vacation School was in operation from 26th May to 6th June, and was attended by 400 students, a large proportion of whom were teachers. Extension lectures were given in the city and in five country centres.

As pointed out previously, a correspondence study department has been inaugurated. in connexion with the University of Queensland in order to overcome, as far as possible, the difficulties of students who desire to benefit by University teaching, but who for various reasons are unable to attend the lectures. In 1924 there were 155 students on the roll. In addition, 6 public lectures and 3 intra-mural courses were given in Brisbane, and 9 lectures in country towns, while 8 classes were conducted in Brisbane and 3 in the country for members of the Workers' Educational Association, and attended by 165 and 49 students respectively, and correspondence lectures were provided for 1,134 country students. Five extension classes in country towns were provided with notes and text-books, and a tutor was appointed to supervise the work.

The Adelaide University has also instituted short courses of extension lectures in Arts and Science, to which students are admitted on payment of a nominal fee. Public intimation of these lectures is made from time to time during the session. Three courses of lectures were delivered in 1924. Enrolments at the twelve tutorial classes in 1924 numbered 779. In addition, short courses of popular lectures, study circles, and tutorial classes were conducted at various local centres.

In Western Australia provision has been made for the giving of courses of extension lectures in Perth and suburbs, and also—by arrangement with local committees—in country centres. The professor of agriculture visits the chief farming districts for the purpose of giving lectures to, and holding conferences with the primary producers. Special short courses for farmers are given at the University. Short courses of popular lectures are also given in the evening by various professors at the University.

In Tasmania during 1919 the University Extension Board which had previously controlled the work of providing extra-mural tuition was replaced by the Committee for Tutorial Classes. The Professor of Economics is director of tutorial classes, and conducts one class annually. There are also lectureships for the northern and west coast districts. Attendance at the classes in 1924 numbered 204.

6. **Workers' Educational Association.**—In 1913 Workers' Educational Associations were formed in all the States of Australia, and later in New Zealand. The movement has for its object the bringing of the University into closer relationship with the masses of the people, and thereby providing for the higher education of the workers in civic and cultural subjects. The work of the Association is gaining in popularity year by year, and the growth of the movement has been phenomenal. The Government of New South Wales at first granted the University of Sydney the sum of £1,000 to initiate a scheme for tutorial classes. There are now direct grants from all State Governments except Western Australia, and an additional University grant in New Zealand. The particulars

of grants for classes are as follow :—New South Wales, £5,970, 61 classes ; Victoria, £4,500, 25 tutorial classes and extension work ; Tasmania, £1,380, 20 classes ; South Australia, £2,550, 23 classes ; Queensland, £3,000, 8 classes and 24 study circles. In addition, the New South Wales Association receives a Government grant for general organizing purposes of £400, paid on the basis of £1 for £1 on subscriptions and donations up to this amount. Correspondence courses form a strong feature of the work in Queensland, groups of construction workers and other outback pioneers being reached thereby. The total number of students throughout Australia is approximately 5,000, the greater number of whom are taking three-year courses while working at their daily occupations. An analysis of these occupations showed that the great majority of the students were wage-earners. The principal subjects chosen in all States are Industrial History, Economics, Political Science, and Sociology, but there is an increasing number of classes in other subjects such as History, Psychology, Philosophy, Literature, Music, Physiology, and Biology. Each University co-operates with the W.E.A. in the formation of a joint committee which appoints tutors and generally supervises the work with the assistance of a University officer with the title of Director of Tutorial Classes. In addition to the longer and more serious courses, a great many preparatory classes, study circles, and summer schools are organized by the Association, numerous courses of public lectures are delivered, educational conferences promoted, and an extensive book service is spreading educational literature throughout Australia. A strong feature of the work of the Association is the organization of a number of country branches to carry facilities for higher education to districts in which these have hitherto been lacking This work has been particularly successful in New South Wales, Victoria, Queensland, and Tasmania. A Commonwealth Conference held at Adelaide in 1918 resulted in the formation of a federal organization now known as " The Workers' Educational Association of Australia." Its central office is in the Education Department, Melbourne. The Federal Council co-ordinates the activities of the W.E.A. in all States, and has inaugurated a series of publications on sociological and economic subjects. Seven books have been published to date, including " Modern Economic History " by Professor H. Heaton ; " Marx and Modern Thought," by G. V. Portus ; " Shadows and Realities of Government." by F. A. Bland ; " A New Province for Law and Order," by Mr. Justice Higgins. The Federal Council also publishes " The Highway," a monthly magazine now in its eighth year, which contains notes on the movement, and general discussions on educational work.

§ 6. Technical Education.

1. **General.**—Although provision has been made in some of the States in respect to many necessary forms of technical education, the total provision made would imply that this branch of education has not been regarded as of great importance. As will be seen later on, the expenditure on technical education for the whole of Australia is comparatively small.

2. **New South Wales.**—Some account of the origin and development of technical education in New South Wales was given in Official Year Book No. 15, page 750, but considerations of space preclude its repetition in this issue. It may be noted, however, that technical education had its origin in this State in 1883, but it was not until the year 1913 that a definitely co-ordinated scheme was adopted. The branch Technical Colleges with the exception of those at Newcastle and Broken Hill, were then superseded by Trade Schools, admission to which was restricted to those actively engaged in the trade concerned, and was dependent also on the possession of a certain degree of preparatory knowledge. Courses of instruction in which workshop experience is not necessary to train the efficient worker—such as Art, Science, and Commercial Courses—are, however, open to all students who have the requisite preliminary knowledge. Advisory committees were appointed for each trade or group of trades and have proved very helpful. The first two or three years' course of instruction is given in the Trade Schools, of which there are ten, and students may then go on for a further two or three years' advanced teaching

at the Technical Colleges, of which there are three, one at Sydney, one at Newcastle, and one at Broken Hill. The higher courses embrace instruction in advanced trades' work qualifying for the position of manager or foreman, but no attempt is made to train for the professional standing. It is hoped, however, that the scheme will develop so that part of the graduates may proceed to the University. Admission to the higher courses will eventually be restricted to those who have either graduated in the Trade Schools of the Department, or who evidence possession of a similar standard of knowledge. In addition to the courses given in the Technical Colleges and Trade Schools, elementary instruction has been provided at various centres where there has been a demand for it, and provision has been made also for special courses of instruction by correspondence. A liberal scheme of scholarships has been drawn up for students passing from the day or evening Junior Technical Schools or Domestic Science Schools, to the Trades and Science Schools, as well as scholarships to the University at the close of the diploma course.

At the end of 1924 the enrolment in the junior technical schools amounted to 5,009, an increase of nearly 1,500 on the figures for the previous years.

The table below gives some idea of the development of technical education in New South Wales during the five years 1920 to 1924 :—

TECHNICAL EDUCATION.—NEW SOUTH WALES, 1920 TO 1924.

Year.	Number of Classes.	Number of Enrolments.	Individual Students.	Number of Lecturers and Teachers.	Fees Received.
					£
1920	638	18,119	9,258	406	12,701
1921	636	18,974	9,696	447	12,641
1922	646	21,328	9,806	470	13,627
1923	664	23,496	10,234	478	14,042
1924	674	25,462	11,386	499	16,644

In 1924 an Employment Bureau was established with the view of finding suitable employment for boys who have completed their course of training.

3. **Victoria.**—Technical instruction in mining has for many years received considerable attention in Victoria, the Ballarat School of Mines, which was established as far back as 1870, having achieved an Australasian reputation. Fine work was also done at the School of Mines in Bendigo, and later on excellent courses of training were evolved at The Working Men's College in Melbourne. The general scheme of instruction, however, lacked cohesion, and it was not until after the publication of the Report of the Royal Commission on Technical Education, which was appointed in 1899, that many defects were remedied. Prior to 1910 the whole of the schools were under the control of local councils, but in the year mentioned the control passed to the Education Department. At the end of 1924 there were 26 Technical Schools receiving State aid. The largest technical institution in Melbourne is the Working Men's College, founded in 1887. The College, in addition to giving instruction in a large number of technical subjects, is also a School of Mines. During 1924 the classes in operation numbered 177, and the average enrolments per term amounted to 2,500. Such institutions as the Swinburne Technical College, and the Ballarat and Bendigo Schools of Mines, have also an extensive curriculum embracing the more important industrial subjects. Special attention has been given in recent years to the provision of technical education for girls. There are, moreover, 24 Junior Technical Schools in existence, giving a two or three years' course of instruction to boys between the ages of 12½ and 15 years, thereby preparing them for the more advanced teaching in the higher schools.

Particulars regarding the growth of technical education in Victoria during the last five years are given in the appended table :—

TECHNICAL EDUCATION.—VICTORIA, 1920 TO 1924.

Year.	Number of Classes.	Number of Enrolments.	Average Attendance.	Fees Received.
				£
1920	115	14,174	10,548	29,132
1921	116	15,105	10,663	25,831
1922	120	16,168	12,236	28,725
1923	125	17,679	12,804	32,286
1924	122	19,234	13,832	32,404

Considerably more than 2,000 returned soldiers have received the advantages of vocational training, and the staff and councils of the various technical schools have taken great interest in the work of teaching and finding employment for qualified trainees.

4. **Queensland.**—Up to the passing of the "Technical Instruction Act of 1908," technical education in Queensland was controlled by local committees, the State simply providing financial aid. Under the provisions of this Act, the State took over the technical colleges at Brisbane, South Brisbane and West End, and formed therefrom a Central Technical College. By an amending Act in 1918, power was taken to assume the control of other technical institutions, and in 1919 the colleges at Toowoomba and Rockhampton came under departmental control. In 1923 the Colleges at Cairns, Townsville, and Bowen, and in 1924 the institution at Bundaberg, were taken over. Technical High Schools were inaugurated in 1921 at the Central and Ipswich Technical Colleges, and the vocational courses given in the High Schools connected with the Colleges at Toowoomba and Rockhampton attracted a large number of students. The Department's policy of combining Technical Colleges with High Schools in the country centres has proved very successful. During 1924 there were seventeen technical colleges in operation, while classes in technical subjects were held in a number of smaller centres. Twelve colleges were directly controlled by the Department and five by local committees. Preparatory Day Trade Schools were established at Ipswich and Brisbane in 1916, and Domestic Science Day Schools at Brisbane and Ipswich in 1915, and at Townsville in 1918. A certain amount of technical and vocational work is also provided for at the Rural Schools (See § 2, 4 (vi.c.)). Two Travelling Domestic Science Schools have been constructed to meet the needs of districts where the population is not sufficient to warrant the establishment of permanent classes, and those institutions have been very successful. The specially-fitted railway cars each travelled over 1,200 miles in 1924, 22 centres were visited, and the courses of instruction were attended by 284 school pupils and 100 adults. The progress of technical education since 1920 is shown in the following table :—

TECHNICAL EDUCATION.—QUEENSLAND, 1920 TO 1924.

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
					£
1920	509	11,863	(a) 9,000	377	13,074
1921	522	11,993	(a) 9,500	372	13,882
1922	512	12,069	(a)10,000	396	14,549
1923	607	11,565	(a)10,000	387	13,220
1924	611	13,002	(a)11,000	364	13,633

(a) Estimated.

Greater attention is being devoted to the development of trade classes, and under the Apprenticeship Act of 1923, apprenticeship is controlled by the Minister for Works, while committees consisting of representatives of employers and employees have been appointed for the various skilled trades. Attendance at apprentices' classes is compulsory in the towns to which the provisions of the scheme have been extended.

5. **South Australia.**—Prior to the year 1917 the condition of affairs in regard to technical education in Australia was regarded by the Education Department as unsatisfactory. There was a School of Mines and Industries in Adelaide, and in addition Schools of Mines at Moonta, Port Pirie, Kapunda, Mount Gambier, and Gawler. While the Government bore the bulk of the cost of maintenance of these institutions, they were controlled by independent councils, and there was no regular co-ordination in regard to staffs, curriculum, etc. A Director of Technical Education was appointed in 1916, and the reorganization of the system was thereupon undertaken. The position in 1921 was, however, still unsatisfactory, as the control of technical education in the State rested with two bodies, (*a*) the Council of the South Australian School of Mines and Industries whose activities are confined to the metropolitan area ; and (*b*) the technical branch of the Education Department, which deals with schools in the metropolis, as well as throughout the country districts. During that year, an amending Act dealing with the technical education of apprentices was passed, and, by proclamation, the scope of the original Act was widened so as to include over 150 separate trades. Regular meetings of the Apprentices Advisory Board were held, and improvements in conditions of apprenticeship were made on their recommendation. In 1924, 609 apprentices and probationers were enrolled in the various classes. The total number of registrations since the inception of the Act was 2,503, and of these 329 completed the full three years' course and received certificates. The Country Technical Schools previously alluded to were maintained in 1924, as also the new schools opened in 1922 at Kadina and Wallaroo. Classes were established at Murray Bridge and Mannum, and a Technical School was opened early in the year at Thebarton.

Particulars regarding the position of technical education in the State during the five years 1920 to 1924 are given hereunder :—

TECHNICAL EDUCATION.—SOUTH AUSTRALIA, 1920 TO 1924.

Year.	Number of Classes.	Enrolments.	Average Attendance.	Number of Teachers.	Fees Received.
					£
1920	358	11,304	8,424	200	5,161
1921	357	10,499	7,187	183	5,713
1922	311	10,609	7,875	160	6,008
1923	332	11,339	8,834	175	6,309
1924	421	12,312	9,416	185	6,465

6. **Western Australia.**—A Technical School was established at Perth in 1900, and since its opening has progressed rapidly. During the year 1924 there was an average enrolment of 2,100 students each term. The school is affiliated to the University, and provides instruction for evening students in University work in mathematics, physics, chemistry, and geology. The trade classes are well supported, and particular attention is devoted to subjects of value to the skilled tradesman. Committees, including representatives of employers and workers' unions, have been formed for each group of trades, and confer regularly with the trade instructors. Full time day classes in engineering are provided for pupils who have passed through the Junior Technical School, and a number of railway apprentices attend the day-classes at Perth and Midland Junction. Classes are also held for mechanics in the Postal Department.

The Fremantle School, which had 567 students on the roll in 1924, is being gradually developed on the trade side. Midland Junction had an average of 143 students, exclusive of railway apprentices, Boulder had 173, and Kalgoorlie 94. Smaller groups of classes were conducted at other centres. The schools are all under the control of the Education Department, the officer entrusted with the supervision being styled Director of Technical Education.

Returns for the last five years are embodied in the table hereunder :—

TECHNICAL EDUCATION.—WESTERN AUSTRALIA, 1920 TO 1924.

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
					£
1920	455	5,424	(*a*)3,158	151	976
1921	461	6,773	(*a*)3,466	145	1,920
1922	449	6,920	(*b*)5,679	153	3,139
1923	446	6,850	(*c*)5,552	146	2,988
1924	451	7,002	(*d*)5,633	147	2,837

(*a*) Individual students. (*b*) 3,471 individual students. (*c*) 3,409 individual students. (*d*) 3,423 individual students.

7. **Tasmania.**—Provision for technical education dates from the year 1888, but in the report of the Commission appointed in 1906 to inquire into the condition of technical education in Tasmania, allusion was made to the want of co-ordination between existing institutions and the Education Department, and it was recommended that the schools should be taken over by the Government, and a trained technologist appointed as organizing inspector. The inspector was appointed in 1917 and a Technical Education Branch was established in 1918. The scheme of technical education includes provision for courses of training in industrial, commercial, and domestic pursuits. Under the first-mentioned, the scheme provides for junior technical schools, applied science schools, technical trade schools, and art and applied art schools, and it is to this group that the activities of the Department have hitherto been almost exclusively confined. The co-operation of employers and employees has been obtained, and certain of the more advanced courses have been co-ordinated with the courses given at the University. There are Junior Technical Schools at Hobart, Launceston, and Queenstown, which had enrolments in 1924 of 110, 95, and 95 respectively. Senior Technical Schools are in operation at Hobart and Launceston organized into Departments of Engineering and Applied Science, Art, and Trade ; and at Queenstown and Zeehan, courses in Metallurigical and Mining Engineering are undertaken.

TECHNICAL EDUCATION.—TASMANIA, 1920 TO 1924.

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
					£
1920	135	1,152	784	63	1,338
1921	167	1,218	860	65	1,286
1922	209	1,098	(*a*)	55	1,069
1923	254	1,151	(*a*)	72	1,133
1924	(*a*)	1,351	971	83	1,533

(*a*) No record.

8. Expenditure on Technical Education.—The expenditure on technical education in each State during the period 1920 to 1924 is shown below :—

TECHNICAL EDUCATION.—EXPENDITURE 1920 TO 1924.

Year.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
		£	£	£	£	£	£	£
1920	(*a*)	211,987	118,168	57,219	34,538	16,326	13,677	451.915
	(*b*)	2,668	9,326	22,607	13,080	494	328	48,503
1921	(*a*)	210,515	162,596	62,321	40,864	19,212	17,808	513,316
	(*b*)	13,972	29,619	4,854	4,172	580	259	53,456
1922	(*a*)	169,925	202,228	59,075	43,744	18,406	18,222	511,600
	(*b*)	48,978	21,750	1,577	708	1,030	151	74,194
1923	(*a*)	146,158	215,320	60,824	46,655	18,189	18,271	505,417
	(*b*)	16,971	45,649	13,379	3.461	1,590	366	81,416
1924	(*a*)	166,844	239,319	62,888	56,140	18,229	20,415	563.835
	(*b*)	7,100	53,572	3,514	5,811	1,003	127	71,127

(*a*) Maintenance. (*b*) Buildings.

Cost of maintenance in New South Wales during 1924 shows a decrease of £45,000 on the figures for 1920, the falling-off being due to the disappearing expenditure on vocational training of soldiers and sailors.

The expenditure on maintenance for technical education in 1924 amounted to 1s. 11d. per head of the population of Australia, as compared with 26s. 8d. per head expended on maintenance for primary education.

§ 7. Business Colleges and Shorthand Schools.

There has been considerable development in recent years both in the number and scope of privately conducted institutions which aim at giving instruction in business methods, shorthand, typewriting, the use of calculating machines, etc. Particulars for all States excepting Queensland are given in the following table :—

BUSINESS COLLEGES, SHORTHAND SCHOOLS, ETC., 1924.

State.	Schools.	Teachers.	Students Enrolled.		Average Attendance.		Fees Received.
			Males.	Females.	Males.	Females.	
							£
New South Wales ..	22	148	1,813	5,111	685	2,646	46,953
Victoria	14	158	4,914	2,868	3,550	2,228	(*b*)
Queensland(*a*) ..	..	..	..	..	..	..	..
South Australia ..	6	44	843	1,335	728	974	14,033
Western Australia	11	45	1,406	717	(*b*)	(*b*)	18,888
Tasmania ..	3	17	155	652	70	169	4,893

(*a*) Included in private schools. (*b*) Not available.

The figures for New South Wales are exclusive of students instructed at home through the medium of correspondence classes.

In Victoria it is explained that the preponderance of male students is due to the larger enrolment of males in the correspondence classes.

§ 8. Diffusion of Education.

1. General Education.—A rough indication of the state of education of the people is obtained at each Census under the three headings, "read and write," "read only," and "cannot read." The grouping of the whole population, exclusive of aborigines, in these three divisions is given for each Census since 1871 :—

EDUCATION AT CENSUS PERIODS, 1871 TO 1921.

State or Territory.		1871.	1881.	1891.	1901.	1911.	1921.
N.S.W. (*a*)	Read & write	296,741	507,067	835,562	1,071,935	1,380,196	1,760,435
	Read only..	56,391	49,372	43,539	29,728	6,557	5,868
	Cannot read	149,866	193,386	244,853	253,183	259,981	334,068
Victoria	Read & write	478,464	653,346	908,490	998,010	1,136,189	1,331,621
	Read only..	70,953	47,950	32,794	21,852	4,741	3,238
	Cannot read	180,781	160,270	198,556	181,208	174,621	196,421
Q'land	Read & write	74,940	136,436	276,381	376,294	508,584	633,338
	Read only..	12,080	13,657	14,618	11,737	3,542	3,108
	Cannot read	33,084	63,432	102,719	110,098	93,687	119,526
S. Aust. (*b*)	Read & write	117,349	200,057	236,514	290,748	344,398	421,025
	Read only..	21,509	15,267	9,571	8,283	1,812	1,643
	Cannot read	46,768	64,541	74,346	64,126	62,348	72,492
W. Aust	Read & write	14,166	19,684	34,254	150,099	237,605	283,344
	Read only..	2,717	2,430	2,061	3,107	972	890
	Cannot read	7,902	7,594	13,467	30,918	43,537	48,498
Tasm'nia	Read & write	55,941	74,966	103,138	133,579	155,447	175,435
	Read only..	13,946	9,606	6,287	3,907	925	610
	Cannot read	29,441	31,133	37,242	34,989	34,839	37,735
Northern Ter.(*c*)	Read & write	..	..	..	..	2,408	2,832
	Read only..	..	..	..	..	36	15
	Cannot read	..	..	..	..	866	1,020
Fed. Cap. Ter.(*d*)	Read & write	..	..	..	..	1,424	2,093
	Read only..	..	..	..	..	14	8
	Cannot read	..	..	..	..	276	471
C'wealth	Read & write	1,037,601	1,591,556	2,394,339	3,020,665	3,766,251	4,610,123
	Read only..	177,596	138,282	108,870	78,614	18,599	15,380
	Cannot read	447,842	520,356	671,183	674,522	670,155	810,231

(*a*) Including Federal Capital Territory prior to 1911. (*b*) Including Northern Territory prior to 1911. (*c*) Included in South Australia prior to 1911. (*d*) Included in New South Wales prior to 1911.

It will of course be understood that the heading "cannot read" includes a large proportion of children under five years of age.

The proportion in Australia of the various classes per 10,000 of the population is shown below for each Census period :—

PROPORTION OF EDUCATED AND ILLITERATE PER 10,000 PERSONS, 1871 TO 1921.
(AUSTRALIA.)

Division.	1871.	1881.	1891.	1901.	1911.	1921.
Read and write ..	6,239	7,073	7,543	8,004	8,454	8,481
Read only	1,068	615	343	208	42	28
Cannot read ..	2,693	2,312	2,114	1,788	1,504	1,491

As pointed out previously, the "cannot read" group includes a large proportion of children under five years of age.

2. Education of Children.—The figures in the preceding tables refer to the entire population of Australia, and as the age constitution of those dwelling in the various portions thereof underwent considerable modifications during the period dealt with, a far more reliable test of the diffusion of education will be obtained by a comparison of the Census returns in regard to children of school age. For comparative purposes this has been taken to include all children in the group over five and under fifteen years of age, and the degree of education of these at each Census from 1861 to 1921 will be found below.

EDUCATION OF CHILDREN OF SCHOOL AGE AT CENSUS PERIODS, 1861 TO 1921.

State or Territory.		1861.	1871.	1881.	1891.	1901.	1911.	1921.
N.S.W.*a*	Read & write	34,040	68,776	121,735	196,240	251,187	291,450	371,106
	Read only..	20,345	26,886	25,100	21,375	15,934	993	497
	Cannot read	25,472	32,924	41,663	48,580	60,734	34,793	67,421
Victoria	Read & write	42,268	122,739	170,713	201,199	236,515	237,028	271,105
	Read only..	25,518	39,636	25,249	15,656	13,128	410	193
	Cannot read	19,341	29,490	21,421	27,441	27,765	19,621	29,002
Q'land	Read & write	2,156	12,698	33,317	62,402	95,635	117,347	144,419
	Read only..	1,534	6,104	7,019	7,580	5,955	616	296
	Cannot read	1,629	6,015	9,615	16,257	18,827	8,633	16,723
S. Aust.*b*	Read & write	15,485	30,608	46,630	58,291	69,451	69,878	89,930
	Read only..	8,748	12,432	7,926	4,618	4,229	248	120
	Cannot read	6,907	10,074	12,483	17,988	15,480	9,638	12,684
W. Aust.	Read & write	1,333	3,218	4,418	6,910	25,326	47,568	62,682
	Read only..	226	617	1,260	933	1,815	159	99
	Cannot read	1,015	1,795	1,593	2,348	5,431	5,234	9,636
Tasm'nia	Read & write	11,919	17,335	17,188	24,007	32,890	36,351	40,458
	Read only..	2,848	4,143	4,108	2,974	1,795	186	63
	Cannot read	4,581	6,663	6,606	8,829	8,475	5,575	7,377
Northern Ter.*c*	Read & write	..	..	..	..	..	195	314
	Read only..	..	..	..	..	..	..	..
	Cannot read	..	..	..	..	..	118	159
Fed.Cap. Ter.*d*	Read & write	..	..	..	..	..	322	402
	Read only..	..	..	..	..	..	2	4
	Cannot read	..	..	..	..	..	47	108
C'wealth	Read & write	107,201	255,374	394,001	549,049	711,004	800,139	980,416
	Read only..	59,219	89,818	70,662	53,136	42,856	2,614	1,272
	Cannot read	58,945	86,961	93,381	121,443	136,712	83,659	143,110

(*a*) Including Federal Capital Territory prior to 1911. (*c*) Included in South Australia prior to 1911.
(*b*) Including Northern Territory prior to 1911. (*d*) Included in New South Wales prior to 1911.

In the case of Tasmania full details for the years 1861 to 1871 are not available, and the figures for those years are approximate. The variation in degree of education may be more readily seen by reducing the foregoing figures to the basis of proportion per 10,000, and the results so obtained are embodied in the following table, a glance at which is sufficient to demonstrate the remarkable strides that at least the lower branches of education have made since 1861. In that year, only 48 per cent. of the children of school age could read and write, while 26 per cent. were illiterate. The returns for 1921 show that the proportion of those who could read and write had increased to over 87 per cent., while the totally illiterate had declined to 13 per cent.

EDUCATION OF CHILDREN (AGES 5 TO 14) PER 10,000 AT CENSUS PERIODS, 1861 TO 1921.

State or Territory.		1861.	1871.	1881.	1891.	1901.	1911.	1921.
N.S.W.*a*	Read & write	4,263	5,349	6,458	7,372	7,662	8,907	8,453
	Read only..	2,547	2,091	1,332	803	486	30	11
	Cannot read	3,190	2,560	2,210	1,825	1,852	1,063	1,536
Victoria	Read & write	4,851	6,397	7,853	8,236	8,526	9,221	9,028
	Read only..	2,929	2,066	1,162	641	473	16	6
	Cannot read	2,220	1,537	985	1,123	1,001	763	966
Q'land	Read & write	4,053	5,116	6,670	7,236	7,942	9,269	8,946
	Read only..	2,884	2,460	1,405	879	495	49	18
	Cannot read	3,063	2,424	1,925	1,885	1,563	682	1,036
S. Aust.*b*	Read & write	4,973	5,763	6,956	7,206	7,790	8,761	8,754
	Read only..	2,809	2,341	1,182	571	474	31	11
	Cannot read	2,218	1,896	1,862	2,223	1,736	1,208	1,235
W. Aust.	Read & write	5,179	5,716	6,076	6,780	7,775	8,982	8,656
	Read only..	878	1,096	1,733	916	557	30	14
	Cannot read	3,943	3,188	2,191	2,304	1,668	988	1,330
Tasm'nia	Read & write	6,160	6,160	6,160	6,704	7,620	8,632	8,447
	Read only..	1,472	1,472	1,472	830	416	44	13
	Cannot read	2,368	2,368	2,368	2,466	1,964	1,324	1,540
Northern Ter.*c*	Read & write	..	..	..	..	..	6,230	6,638
	Read only..	..	..	..	..	..	..	..
	Cannot read	..	..	..	..	..	3,770	3,362
Fed.Cap Ter.*d*	Read & write	..	..	..	..	..	9,868	7,821
	Read only..	..	..	..	..	..	5	78
	Cannot read	..	..	..	..	..	127	2,101
C'wealth	Read & write	4,757	5,910	7,061	7,588	7,984	9,027	8,717
	Read only..	2,628	2,078	1,266	734	481	29	11
	Cannot read	2,615	2,012	1,673	1,678	1,535	944	1,272

(*a*) Including Federal Capital Territory prior to 1911. (*b*) Including Northern Territory prior to 1911.
(*c*) Included in South Australia prior to 1911. (*d*) Included in New South Wales prior to 1911.

3. **Education as shown by Marriage Registers.**—Another common method of testing the spread of education is to compare the number of mark signatures with the total number of persons married during each year of a series. The percentage of males and females signing with a mark to the total persons married in the Census years 1861 to 1921 was as follows :—

EDUCATION.—MARRIAGE SIGNATURES, AUSTRALIA, 1861 TO 1921.

Year.	Proportion Signing with Marks of Total Persons Married.			Year.	Proportion Signing with Marks of Total Persons Married.		
	Males.	Females.	Total.		Males.	Females	Total.
	Per cent.	Per cent.	Per cent.		Per cent.	Per cent.	Per cent.
1861 ..	18.50	30.69	24.60	1901 ..	1.35	1.29	1.32
1871 ..	10.58	16.40	13.49	1911 ..	0.56	0.54	0.55
1881 ..	4.34	6.78	5.56	1921 ..	0.16	0.18	0.17
1891 ..	2.27	2.40	2.34				

The table shows that there has been a large diminution in illiteracy, and judging from the figures for the last few years the proportion bids fair to practically disappear.

§ 9. Miscellaneous.

1. Scientific Societies.—(i) *Royal Societies.* Despite the trials and struggles incidental to the earlier years of the history of Australia, higher education and scientific advancement were not lost sight of. Thus the origin of the Royal Society dates as far back as 1821, when it was founded under the name of the Philosophical Society of Australasia, Sir Thomas Brisbane being its first president. Scientific work was fitfully carried on by means of a Society whose name varied as the years rolled on. It was called the Australian Philosophic Society in 1850. In 1856 the old Australian Society merged into a resuscitated Philosophical Society of New South Wales, and its papers were published up to 1859 in the Sydney Magazine of Science and Art (2 vols., 1858–9). Its present title dates from 1866. Some of the papers of the old Philosophical Society were published in 1825 under the title of "Geographical Memoirs of New South Wales" (Barron Field), and contain much that is interesting in regard to the early history of Australia. One volume containing the Transactions of the Philosophical Society of New South Wales (1862–65) was published in 1866. The journal of the Society did not begin to bear a serial number, however (vol. 1), until the year 1867. "Transactions of the Royal Society of New South Wales" were published in 1867, the title of the series being altered to "Journal" in 1878. Up to the end of 1925, 59 volumes had been published. The exchange list comprises the names of 383 kindred societies. At the present time the library contains over 30,000 volumes and pamphlets, valued at about £9,000. Income and expenditure for the year ended 31st March, 1925, were £1,737 and £1,885 respectively, and the Society had on the same date 379 members.

The Royal Society of Victoria dates from 1854, in which year the Victorian Institute for the Advancement of Science and the Philosophical Society of Victoria were founded. These were amalgamated in the following year under the title of the Philosophical Institute of Victoria, whilst the Society received its present title in 1860. The first volume of its publications dates from 1855. Up to 1925, 70 volumes of proceedings had been issued. The Society exchanges with 250 kindred bodies. The constitution of the Society states that it was founded "for the promotion of art, literature, and science," but for many years past science has monopolized its energies. A mathematical and physical section encourages discussion in these sciences. The library contains over 16,000 volumes, valued approximately at £4,200. Income for the year 1925 amounted to £628, and expenditure to £634. There are 206 members on the roll.

The inaugural meeting of the Royal Society of Queensland was held on the 8th January, 1884, under the presidency of the late Sir A. C. Gregory. The Society was formed "for the furtherance of the natural and applied sciences, especially by means of original research." Shortly after its formation it received an addition to its ranks by the amalgamation with it of the Queensland Philosophical Society, which was started at the time when Queensland became a separate colony. At the end of 1925 the members numbered 166; publications issued, 37 volumes; library, 7,500 volumes; societies on exchange list, 230. Income and expenditure in 1925 amounted to £338 and £294 respectively.

The Royal Society of South Australia grew out of the Adelaide Philosophical Society, which was founded in 1853, its object being the discussion of all subjects connected with science, literature, and art. Despite this programme, the tendency of the papers was distinctly scientific, or of a practical or industrial nature. With the advent of the late Professor Tate, the Society became purely scientific. Permission to assume the title of "Royal" was obtained in 1879, the Society thenceforward being known as "The Royal Society of South Australia." In 1903 the society was incorporated. In 1925 the number of members was 134. The income for the year 1924 was £650, and expenditure £742. Up to 1924 the Society had issued 48 volumes of proceedings and 8 parts of memoirs, exclusive of several individual papers published in earlier years. The exchange list numbers about 220, while the library contains 4,400 volumes and over 1,900 pamphlets. The Field Naturalists section of the Society comprises 220 members, and issues a small quarterly journal called "The South Australian Naturalist."

Permission to assume the title of Royal Society was granted to the Natural History and Science Society of Western Australia in March, 1914. This Society has grown out of the Mueller Botanic Society, founded in July, 1897. The objects of the Society are the study of natural history and pure science, promoted by periodical meetings and field excursions, the maintenance of a library, and issue of reports of proceedings. It numbers at present 267 members, whose subscriptions form its only source of revenue, the income and expenditure in 1924–25 being £267 and £179 respectively. Five volumes of proceedings were issued as Journal of the Natural History and Science Society of Western Australia, and eleven as of the Royal Society. Its publications are exchanged with 78 institutions at home and abroad. The library contains some 200 volumes, and over 1,000 unbound journals, pamphlets, etc.

The Royal Society of Tasmania (the first Royal Society outside the United Kingdom) was inaugurated by Sir Eardley Wilmot, Lieutenant-Governor of Van Diemen's Land on the 14th October, 1843. It may be mentioned, however, that a scientific society had been formed as far back as 1838 under the presidency of Sir John Franklin, then Governor of the colony, and in 1841 the number of resident members was 31, and corresponding members, 38. The meetings of this parent society were held at Government House, and three volumes of proceedings were issued. A large portion of the Colonial Gardens, together with a grant of £400, was given to the Society. A library and museum were established in 1848. In 1885 the museum and gardens were given back to the State, the Society being granted room in the museum for its library and meetings. The names of Captains Ross and Crozier, of H.M.S. *Erebus* and *Terror*, appear in the list of the first corresponding members. The Society, which, since 1844, has published 64 annual volumes of proceedings, possesses 225 members, 8 corresponding members, 9 life members, exchanges with 230 kindred bodies, and has a library containing 14,000 volumes, in addition to manuscripts, etc., valued at over £10,000. Income for the year 1925 was £403, and expenditure £391.

(ii) *The Australasian Association for the Advancement of Science.* This Association was founded in 1887, with head-quarters at the Royal Society's House in Sydney. It was recognized that in addition to Royal, Linnean, and Naturalists' Societies generally, there was a decided necessity for an organization representative of scientific education in Australia and New Zealand "to give a stronger impulse and a more systematic direction to scientific inquiry, to promote the intercourse of those who cultivate science in different parts of the Commonwealth of Australia, the Dominion of New Zealand, and in other countries, to obtain more general attention to the objects of science, and a removal of any disadvantages of a public kind which may impede its progress." The Association aims at co-operation between the workers in the various branches of science on the one hand, and between the professional scientist and the general public on the other. Its meetings are usually held biennially within the various States and in the Dominion of New Zealand. The next meeting will be held in Perth in August, 1926. Although the actual funds of the Association are small, liberal aid has always been forthcoming from the various State Governments, especially in connexion with the printing of the important volumes of its proceedings, of which Vol. XVI. is the latest issued. The library of the Association contains 4,000 volumes. Not the least important of the activities of the Association was the giving a constitution to the Australian National Research Council which brought in its train the Pan-Pacific Scientific Congress of 1923.

(iii) *Other Scientific Societies.* The Linnean Society of New South Wales, with head-quarters in Sydney, was founded in 1874. The soundness of its present position is due to the benefactions of Sir William Macleay, who during his lifetime and by his will endowed the Society to the amount of £67,000, which has been increased by judicious investment to nearly £80,000. Income for the year 1925 amounted to £5,445 and expenses to £5,365, including £2,411 for research purposes. The Society maintains a research bacteriologist, and offers annually 4 research fellowships in various branches of natural history. The library comprises some 13,000 volumes, valued at about £7,000. Forty-eight volumes of proceedings have been issued, and the Society exchanges with some 180 kindred institutions. The ordinary membership at the end of 1924 was 165.

The British Astronomical Society has a branch in Sydney, and in some of the States the British Medical Association has branches.

In addition to the societies enumerated above, there are various others in each State devoted to branches of scientific investigation.

2. Public Libraries.—In each of the capital cities there is a well-equipped Public Library, the institutions in Melbourne and Sydney especially comparing very favourably with similar institutions elsewhere. The following statement gives the number of volumes in the Public Library of each capital city :—

METROPOLITAN PUBLIC LIBRARIES, 1924.

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Sydney	335,802	(*b*)	44,529	380,331
Melbourne	307,325	42,314	..	349,639
Brisbane	45,834	..	..	45,834
Adelaide	129,413	47,430	..	176,843
Perth	121,845	..	16,888	138,733
Hobart	25,000	..	..	25,000

(*a*) Including 114,115 volumes in the Mitchell Library.

(*b*) The maintenance and control of the ordinary lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. At the end of December, 1924, the books numbered 45,034.

During 1921 the Public Library authorities in Sydney inaugurated the system of lending boxes of children's books to country schools, and a large number of these children's travelling libraries are now in operation. Boxes are forwarded to out-back schools distant from towns. Each box contains about 40 books, and is lent for a period of four months, and then exchanged for another collection, the Library Trustees defraying the cost of carriage both ways.

A special research staff attached to the Public Library gives valuable assistance in making readily available to inquirers the store of information contained in books, etc. which, owing to limitations of space, are not in open access.

The Mitchell Library in Sydney consisted of over 60,000 volumes and pamphlets, and 300 paintings, principally relating to Australasia, valued at £100,000, and bequeathed in 1907 by Mr. D. S. Mitchell, together with an endowment of £70,000. The testator stipulated that the regulations of the British Museum were to be adopted as far as practicable, hence the library is the resort of specialists. There are now about 114,000 volumes in the library in addition to valuable collections of Australian postage and fiscal stamps.

Amongst other important libraries in New South Wales may be mentioned the "Fisher" Library at Sydney University, with 155,000 volumes; the library at the Australian Museum, 24,000; the Teachers' College library, 23,000; Sydney Technical College library, 11,000; and the library at the Botanic Gardens, 9,000. Libraries attached to the various State Schools possessed about 422,000 volumes in 1924.

The reading room at the Melbourne Public Library ranks among the finest in the world. It was opened in 1913, and has a diameter of 114 feet, with a similar height, and is capable of seating 320 readers at a time, all of whom are under efficient supervision from the centre of the room. During the year 1924, 3,437 volumes were lent to Mechanics' Institutes and Free Libraries, and 763 books were sent by post to borrowers in the country.

The library at Brisbane (South) contained about 14,000 volumes at the end of 1923.

For some years past efforts have been made in South Australia to collect original documents likely to be of service in compiling a history of the State. So far back as 1914 Professor Henderson, of Adelaide University, under commission from the South Australian Government, visited and reported on the system of keeping archives in England, France, Belgium, Holland, and Ceylon, and obtained valuable information also from the United States and Canada. A department of historical documents has been created under the care of an archivist, and valuable work has been done in connexion with examination, classification, and permanent preservation of the available papers. A suitable building for housing the documents and the staff was provided in 1921.

During 1922 the Tasmanian Public Library adopted the plan of lending books to individual country borrowers and to families or committees of residents in country districts. The Public Library at Launceston contains 31,000 volumes.

Mention may be made here of the free library attached to the Commonwealth Patents Office, which contains over 10,000 volumes, including literature dealing with patents in the principal countries of the world.

Statistics in regard to libraries generally are not available for all States, while the information supplied is not in all cases complete. Returns for Victoria in 1924 showed a total of 524 libraries in receipt of State or municipal aid, containing 1,307,000 books; Queensland returned 221 libraries, with 457,000 books; South Australia, 237 libraries and 823,000 books; Western Australia, 265 libraries and 288,000 books; Tasmania, 23 libraries and 121,000 books; while there are 2 libraries, with 3,000 books, in the Northern Territory.

3. **Public Museums.**—The Australian Museum in Sydney, founded in 1836, is the oldest institution of its kind in Australia. In addition to possessing fine collections of the usual objects to be met with in kindred institutions, the Museum contains a very valuable and complete set of specimens of Australian fauna. The cost of construction of the building was £79,000. The number of visitors to the institution in 1924 was 261,000, and the average attendance on week-days 717, and on Sundays 1,363. The expenditure for 1924 amounted to £21,000. A valuable library containing about 24,000 volumes is attached to the Museum. Courses of evening popular lectures are delivered, and lecturers also visit distant suburbs and country districts, while afternoon lectures for school children are provided. Nature talks are also broadcasted by wireless. Representative collections illustrative of the natural wealth of the country are to be found in the Agricultural and Forestry Museum, and the Mining and Geological Museum. The latter institution prepares collections of specimens to be used as teaching aids in country schools. The "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History, and the Museum of Normal and Morbid Anatomy, connected with the University, and the National Herbarium and Botanical Museum at the Sydney Botanic Gardens, are all accessible to the public. There is a fine Technological Museum in Sydney, with branches in five country centres. Valuable research work is being performed by the scientific staff in connexion with oil and other products of the eucalyptus, and the gums, kinos, tanning materials, and other economic products of native vegetation generally. During 1922 the work of the Museum was strengthened by the appointment of an advisory committee representing the scientific, general, and industrial activities of the State. The number of visitors to the Technological Museums during 1924 was about 136,000.

The National Museum at Melbourne, devoted to Natural History, Geology, and Ethnology, is located in the Public Library Building. The National Art Gallery is situated in the same building. The Industrial and Technological Museum, also housed under the same roof, contains about 10,000 exhibits. Cost of construction for the combined institutions is set down at £327,000. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. In addition to the large collection in the geological museum attached to the Mines Department in Melbourne, well-equipped museums of mining and geological specimens are established in connexion with the Schools of Mines in the chief mining districts.

The Queensland Museum dates from the year 1871, but the present building was opened in January, 1901. Since its inauguration the Government has expended on the institution a sum of £110,410, of which buildings absorbed £20,735, purchases £31,451, and salaries £58,224. The number of visitors during 1923 was 102,000, of whom 44,000 visited the institution on Sundays. The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and in Brisbane, opened in 1892.

Under the Public Library Act of 1884 the South Australian Institute ceased to exist, and the books contained therein were divided amongst the Museum, Public Library, and Art Gallery of South Australia, and the Adelaide Circulating Library. The Museum was attended by 91,000 visitors in 1924. Cost of construction of the Museum building was returned as £65,000.

The latest available returns show that the Western Australian Museum and Art Gallery contains altogether 101,000 specimens, of an estimated value of £81,700. The Museum is housed in the same building as the Art Gallery, and the visitors to the combined institutions during the year reached 67,000. Cost of construction of the building amounted to £45,800.

There are two museums in Tasmania—the Tasmanian Museum at Hobart, and the Victoria Museum and Art Gallery at Launceston—both of which contain valuable collections of botanical, mineral, and miscellaneous products. The Museums received aid from the Government during 1924 to the extent of £1,664. The cost of construction in each case is included in that of Art Galleries given below.

4. **Public Art Galleries.**—The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. Cost of construction of the present building amounted to about £94,000. At the end of 1924 its contents, which are valued at £170,000, comprised 533 oil paintings, 422 water colours, 831 black and white, 179 statuary and bronzes, and 807 ceramics, works in metal and miscellaneous. During 1924 the average attendance on week days was 474, and on Sundays 1,516. Since the year 1895 loan collections of pictures have been regularly forwarded for exhibition in important country towns.

The National Gallery at Melbourne at the end of 1924 contained 677 oil paintings, 5,370 objects of statuary, bronzes, ceramics, etc., and 14,513 water colour drawings, engravings, and photographs. The Gallery is situated in the same building as the Museum and Public Library, the total cost of construction being £327,000. Several munificent bequests have been made to the institution. That of Mr. Alfred Felton, given in 1904, amounts to about £8,000 per annum. In 1913, Mr. John Connell presented his collection of art furniture, silver, pictures, etc., the whole being valued at £10,000. The Art Gallery at Ballarat contains over 400 oil paintings and water colours, with some fine statuary, bronzes, etc., while there are some valuable works of art in the small galleries at Bendigo, Castlemaine, Geelong, and Warrnambool, and in some cases pictures are sent on loan from the National Gallery.

The Queensland National Art Gallery, situated in the Executive Buildings, Brisbane, was founded in 1895, and contains a small, but well chosen collection of pictures. At the end of 1923 there were on view 104 oil paintings, 28 water colours, 147 black and white, and 33 pieces of statuary, together with various prints, mosaics, and miniatures. Exclusive of exhibits on loan, the contents are valued at about £11,300. Visitors during the year averaged 160 on Sundays and 119 on week days.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2,000 in the purchase of pictures, which were exhibited in the Public Library Building in 1882. The liberality of private citizens caused the gallery rapidly to outgrow the accommodation provided for it in 1889 at the Exhibition Building, and on the receipt of a bequest of £25,000 from the late Sir T. Elder, the Government erected the present building, which was opened in April, 1900. The Gallery also received bequests of £16,500 in 1903 from the estate of Dr. Morgan Thomas, and of £3,000 in 1907 from Mr. David Murray. At the 30th June, 1925, there were in the Gallery 632 paintings in oil and water colour, 265 drawings and black and whites, 247 statuary, furniture, and art work, 6,380 prints, and 1,430 ceramics and miscellaneous. Building and site are valued at upwards of £31,000. Visitors during the year 1924 numbered 77,000. The cost of construction of the Art Gallery amounted to £22,000.

The foundation stone of the present Art Gallery at Perth in Western Australia was laid in 1901, and, as in the case of Melbourne, the Public Library, Museum, and Art Gallery are all situated in the one structure. The collection comprises 107 oil paintings, 53 water colours, 256 black and white, 275 statuary, and 1,150 ceramic and other art objects. Visitors to the Museum and Art Gallery in 1924 numbered 67,000.

In Tasmania, the Art Gallery at Hobart was opened in 1887. Its present contents consist of 125 oil paintings, 132 water colours, 21 black and white, and 175 etchings, engravings, etc., the value of the contents being estimated at £5,000. The cost of construction of the building was £4,500.

The Art Gallery at Launceston was erected in 1888 at a cost of £6,000, and opened on the 2nd April, 1891. Only a small proportion of the contents belongs to the gallery, the bulk of the pictures being obtained on loan. At latest date there were on view 100 oil paintings, 65 water colours, and miscellaneous exhibits, the whole being valued at £4,900.

5. State Expenditure on all Forms of Educational Effort.—The expenditure from the Consolidated Revenue in each State and Territory on all forms of educational and scientific activity during each of the last five financial years was as follows :—

EXPENDITURE ON EDUCATION, SCIENCE, AND ART, 1920–21 TO 1924–25.

State or Territory.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
New South Wales ..	Total £	3,737,960	3,736,294	3,777,551	3,779,896	3,987,709
	Per head	35/8	35/1	34/9	34/2	35/4
Victoria	Total £	1,847,184	1,955,036	2,048,949	2,166,763	2,259,529
	Per head	24/2	25/3	25/9	26/8	27/3
Queensland ..	Total £	1,350,399	1,362,197	1,349,387	1,410,089	1,510,944
	Per head	36/0	35/6	34/3	34/9	36/2
South Australia ..	Total £	607,160	627,075	623,902	709,728	764,914
	Per head	24/9	25/0	24/4	27/0	28/5
Western Australia ..	Total £	543,356	596,518	604,947	621,168	628,755
	Per head	32/10	35/6	35/3	35/1	34/6
Tasmania	Total £	263,524	281,677	281,602	271,321	286,334
	Per head	24/9	25/10	25/9	24/9	26/3
Northern Territory	Total £	4,291	4,860	4,884	4,515	4,858
	Per head	21/6	26/0	27/6	25/5	27/0
Australia ..	Total £	8,353,874	8,563,657	8,691,222	8,963,480	9,443,043
	Per head	30/11	31/1	30/10	31/2	32/2

The comparatively heavy increases during the last five years are partly due to the expanding provision for State-aided education, to greater cost of building, equipment, and maintenance, and to increments in teachers' salaries and allowances.

CHAPTER X.

PUBLIC JUSTICE.

§ 1. Police.

1. **General.**—In early issues of the Year Book a résumé was given of the evolution of the police force in Australia up to the passing of the Police Act of 1862 (25 Vic. No. 16) in New South Wales, but considerations of space preclude its inclusion in the present volume.

2. **Strength of Police Force.**—(i) *General.* The strength of the police force in each State during the five years ended 1924 is given in the table hereunder. It may be mentioned that the police forces are entirely under State control, but, by arrangement, the Commonwealth Government utilizes their services in various directions, such as the collection of particulars for Commonwealth electoral rolls, etc.

POLICE FORCES.—STRENGTH, 1920 TO 1924.

State.	Area of State in Sq. Miles.	1920.	1921.	1922.	1923.	1924.
New South Wales ..	310,372	2,630	2,738	2,799	2.825	2,890
Victoria	87,884	1,733	1,736	1,741	1,251	1,810
Queensland ..	670,500	1,126	1,105	1,113	1,114	1,127
South Australia ..	380,070	566	593	576	599	616
Western Australia	975,920	473	493	489	502	523
Tasmania ..	26,215	240	240	240	240	241
Northern Territory	523,620	32	30	32	32	32
Total ..	2,974,581	6.800	6.935	6,990	6,563	7,239

The figures for New South Wales for 1924 are exclusive of 33 "black trackers," i.e., natives employed in detection of offenders chiefly in outlying districts, and 4 female searchers. For Queensland the figures exclude 67 native trackers and 1 female searcher; for South Australia 10 "black trackers" and 1 female searcher, and for the Northern Territory 28 "black trackers." There are also 43 "black trackers" and 5 female searchers in Western Australia, not included in the table. According to the returns, women police are employed in all the States except Queensland, the respective numbers being—New South Wales 4, Victoria 4, South Australia 11, Western Australia 5, and Tasmania 2. Their work is mainly preventive, and the importance and usefulness of their duties have been referred to in very high terms, especially by the Commissioners of Police in South Australia and Western Australia.

The strength of the force in Victoria for the year 1923 was below normal, owing to dismissals consequent on the dispute which occurred in November of that year.

(ii) *Proportion to Population.* The average number of inhabitants to each officer in each State during the same period is as follows. In considering these figures, allowance must, of course, be made for the unequal area and unequal distribution of the population of the various States.

POLICE FORCES.—COMPARISON WITH POPULATION. 1920 TO 1924.

State.	Number of Persons per Sq. Mile, 1921 Census.	Inhabitants to each Police Officer.				
		1920.	1921.	1922.	1923.	1924.
New South Wales	6.80	787	770	769	777	772
Victoria	17.42	873	885	902	1,285	907
Queensland	1.13	662	690	702	720	732
South Australia	1.30	860	839	879	864	860
Western Australia	0.34	698	677	695	694	687
Tasmania	8.15	876	889	895	897	891
Northern Territory	..	131	130	114	113	113
Total	1.83	788	787	797	867	802

As explained previously the figures for Victoria for the year 1923 are abnormal.

3. **Duties of the Police.**—In addition to the ordinary employment attaching to their office, the police are called upon to perform many duties which in other countries are carried out by various functionaries. Thus, in New South Wales, according to the Report of the Inspector-General, the time of one-fifth of the force was taken up during 1921 in extraneous duties unconnected with the protection of life and property, while the cash value of the services rendered to other Government departments was stated as over £200,000 per annum. The Queensland Commissioner refers to the circumstance that in 1924 no less than 70 subsidiary offices were held by the police. In South Australia, the Commissioner alludes to the large number of subsidiary duties performed by police officers, and mentions that in 1924 over 97,000 inquiries were made on behalf of other departments.

While these special tasks doubtless involve some degree of sacrifice of ordinary routine duties, the fact that the general intelligence of the police is adequate for their performance, besides being most creditable, results in a large saving of the public money.

4. **Cost of Police Forces.**—The expenditure from Consolidated Revenue on the police forces, and the cost per head of population in each State during the five years 1920 to 1924, are given in the following table :—

POLICE FORCES.—COST, 1920 TO 1924.

State.	1920.	1921.	1922.	1923.	1924.
			TOTAL.		
	£	£	£	£	£
New South Wales ..	1,101,767	1,150,323	1,205,557	1,219,244	1,317,320
Victoria..	577,407	579,351	600,856	755,698	741,126
Queensland	476,153	458,955	455,519	461,446	497,484
South Australia	197,157	211,428	216,109	221,635	246,646
Western Australia ..	186,717	184,245	181,893	185,945	193,461
Tasmania	79,372	79,105	77,096	78,313	81,318
Northern Territory ..	12,970	15,520	16,011	16,070	17,923
Total	2,631,543	2,678,927	2,753,041	2,938,351	3,095,278
			PER HEAD OF POPULATION.		
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*
New South Wales ..	10 6	10 10	11 1	11 0	11 8
Victoria..	7 7	7 6	7 7	9 4	8 11
Queensland	12 8	11 11	11 7	11 5	11 11
South Australia	8 0	8 5	8 5	8 5	9 2
Western Australia ..	11 3	11 0	10 7	10 6	10 7
Tasmania	7 6	7 3	7 0	7 2	7 6
Northern Territory ..	65 0	81 6	90 2	90 5	99 7
Total	9 9	9 9	9 9	10 3	10 6

In view of the small number of its white population and the vast extent of country to be patrolled, the figures for the Northern Territory necessarily show a very high average. The duties of the police, moreover, chiefly pertain to matters connected with the control of aborigines.

The total for New South Wales in 1924 includes £139,200 payment to the Police Superannuation Fund. Similar payments in Victoria and Queensland amount to £118,000 and £46,900 respectively, while smaller sums are included in the returns for other States.

The relatively high cost per head in Queensland and Western Australia is due to the fact that there are in those States extensive areas of sparsely settled country, in which mounted patrols have to be maintained. It may be noted also that the high cost and cost per head in Victoria shown for the year 1923, as compared with previous years, are accounted for by expenditure in connexion with the police dispute in 1923.

The general advance in cost during the period under review is due to increases in salaries, and rise in prices of supplies and equipment.

5. **Interstate Police Conferences.**—In February, 1921, a Conference of the chief officers of the police forces of the various States was held in Melbourne. In addition to the discussion of matters of common interest, arrangements were made for the interchange of detectives. The results were so satisfactory that it was decided to hold similar Conferences annually, and the 1924 session of the Conference was held at Adelaide in January, while a Conference of Police Commissioners met at Sydney in February of that year.

§ 2. Lower (Magistrates') Courts.

1. **General.**—In considering the criminal returns of the various States, due allowance must be made on account of several factors, such as the relative powers of the courts, both lower and higher, etc. In the case of lower courts, the actual number of laws in each State the breach of which renders a person liable to fine or imprisonment must be taken into account. Again, the attitude of the magistracy and police towards certain classes of offences is a factor, for in the case of liquor laws, or laws connected with vagrancy or gaming, the views of magistrates, and instructions issued to the police, may be responsible for considerable variations in the returns. The strength and distribution of the police forces, and the age-constitution and distribution of the State's population, also influence the results. Due weight should also be given to the prevalence of undetected crime, but information on this point is not available for all States. It may be mentioned that each State has its own separate judicial system, the Commonwealth jurisdiction being confined to the High Court of Australia, which is largely a Court of Appeal intermediate to the Privy Council, although it has also original jurisdiction, and the Commonwealth Court of Arbitration and Conciliation. Full particulars regarding the judicial power of the Commonwealth will be found in Chapter III. of the Commonwealth Constitution, which is quoted in full in Chapter I. of this work.

2. **Powers of the Magistrates.**—In New South Wales there is no general limit to the powers of the magistrates in regard to offences punished summarily, their authority depending in each case on the statute which creates the offence and gives them jurisdiction. Except in the case of a very few statutes, and excluding cumulative sentences, the power of sentence is limited to six months. Imprisonment in default of payment of fine is regulated by a scale limiting the maximum period according to the sum ordered to be paid, but in no case exceeding twelve months. Actions for debt and damage within certain limits also come within magisterial jurisdiction. In cases of debts, liquidated or unliquidated, the amount recoverable is not exceeding £50 before a court constituted of a stipendiary or police magistrate at certain authorized places, and not exceeding £30 at any other place before a court constituted of a stipendiary or police magistrate or two or more justices of the peace. The amount in actions of damage is limited to £10, but may extend to £30 by consent of parties.

In Victoria, the civil jurisdiction of magistrates is restricted to what may be designated ordinary debts, damages for assault, restitution of goods, etc., where the amount in dispute does not exceed £50. No definite limit is fixed to the powers of the magistrates on the criminal side, and for some offences sentences up to two years may be imposed. The proportion of long sentences is, however, comparatively small.

In Queensland, generally speaking, the maximum term of imprisonment which justices can inflict is six months, but in certain exceptional cases, such as offences against sections 233 and 445 of the Criminal Code (betting-houses and illegally using animals) sentences of twelve months may be imposed. No limit exists as to the extent to which cumulative sentences may be applied, but in practice the term is never very lengthy.

In South Australia, under the Minor Offences Act, magistrates can impose sentences up to six months, and under the Summary Convictions Act, up to three months. The Police Act of 1916 gives power to sentence up to one year, with hard labour, in the case of incorrigible rogues; while under the Quarantine Act of 1877, and the Lottery and Gaming Act of 1875, sentences of two years may be imposed.

Under the Petty Offences Act of 1867, in Tasmania, any person charged with having committed, or with having aided or abetted in the commission of an offence in regard to property of a value not exceeding £10, may, on conviction for a first offence before two or more justices in Petty Sessions, be imprisoned for any term not exceeding one year, and for a term not exceeding two years for a second or subsequent offence.

3. **Persons Charged at Magistrates' Courts.**—The total number of persons who were charged before magistrates in each State is given below for the five years 1920 to 1924 :—

MAGISTRATES' COURTS.—PERSONS CHARGED, 1920 TO 1924.

State.	1920.	1921.	1922.	1923.	1924.
New South Wales ..	89.572	94,685	96,989	104,519	98,101
Victoria..	56,698	62,402	63,713	67,112	68,494
Queensland	24,180	24,479	25,185	25,956	24,017
South Australia	10,143	10,622	11,821	14,321	15,812
Western Australia ..	10,430	10,775	10,844	10,182	10.679
Tasmania	6,629	7,185	7,106	8,479	8,001
Northern Territory ..	221*a*	115	186	154	204
Total	197,873	210,263	215,844	230,723	225,308

(*a*) Year 1919. Returns for 1920 not available.

Investigation of the returns shows that considerable variations in the figures for single States are occasioned by breaches of new Acts, or the more stringent enforcement of the provisions of existing Acts. Any deductions drawn from the total returns as to the increase or otherwise of criminality must, therefore, be largely influenced by a careful analysis of the detailed list of offences.

4. **Convictions and Committals.**—The figures given in the tabulation above include, of course, a number of people who were wrongly charged, and statistically are not of general importance. The actual number of convictions in connexion with the persons who appeared before the lower courts in each year of the period 1920 to 1924 is, therefore, given hereunder. A separate line is added showing the committals to higher courts.

MAGISTRATES' COURTS.—CONVICTIONS AND COMMITTALS, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
New South Wales ..	Convictions	74,667	80,214	82,263	88,864	83,019
	Committals	2,239	2,594	2,495	2,654	2,327
Victoria	Convictions	43,088	46,924	49,464	53,183	54,376
	Committals	795	776	733	634	602
Queensland ..	Convictions	21,922	22,479	22,982	23,072	21,476
	Committals	309	328	331	341	233
South Australia ..	Convictions	8,628	8,968	10,048	12,647	13,790
	Committals	123	121	146	193	176
Western Australia ..	Convictions	9,198	9,605	9,748	8,985	9,534
	Committals	112	120	68	92	92
Tasmania	Convictions	6,034	6,474	6,385	7,601	7,271
	Committals	71	88	79	78	59
Northern Territory	Convictions	187*a*	100	171	117	145
	Committals	3*a*	8	4	3	5
Total ..	Convictions	163,724	174,764	181,061	194,469	189,611
	Committals	3,652	4,035	3,856	3,995	3,494

(*a*) Year 1919. Returns for 1920 not available.

5. Convictions for Serious Crime.—While the figures given in the preceding table refer to the entire body of convictions, the fact must not be overlooked that they include a large proportion of offences of a technical nature, many of them unwittingly committed, against various Acts of Parliament. Cases of drunkenness and minor breaches of good order, which, if they can be said to come within the category of crime at all, at least do so in a very different sense to some other offences, also help to swell the list. The following table has therefore been prepared for the purpose of showing the convictions at magistrates' courts for what may be regarded as the more serious offences, i.e., against the person and property, either separately or conjointly, and forgery and offences against the currency :—

MAGISTRATES' COURTS.—CONVICTIONS FOR SERIOUS CRIME, 1920 TO 1924.

State.	1920.	1921.	1922.	1923.	1924.
TOTAL.					
New South Wales ..	7,704	8,057	7,744	7,543	7,210
Victoria..	4,294	3,719	2,909	3,188	2,815
Queensland	1,357	1,747	1,835	2,021	1,881
South Australia	772	855	653	883	724
Western Australia ..	993	976	977	930	941
Tasmania	548	550	577	637	549
Northern Territory ..	11*a*	42	60	17	25
Total	15,679	15,946	14,755	15,219	14,145

(*a*) Year 1919. Returns for 1920 not available.

State.	1920.	1921.	1922.	1923.	1924.
PER 10,000 OF THE POPULATION.					
New South Wales ..	37.2	38.2	36.0	34.4	32.3
Victoria..	28.4	24.2	18.5	19.8	17.1
Queensland	18.2	22.9	23.5	25.2	22.8
South Australia	15.9	17.2	12.9	17.1	13.7
Western Australia ..	30.1	29.2	28.8	26.7	26.2
Tasmania	26.0	25.8	26.9	29.6	25.6
Northern Territory ..	26.1	107.5	164.2	47.1	69.4
Total	29.3	29.2	26.5	26.8	24.4

6. Decrease in Serious Crime, 1881 to 1924.—(i) *Rate of Convictions.* The figures quoted in the preceding table show that while during the last five years the rate of serious crime has decreased considerably, if the comparison be carried back to 1881 the position is seen to be still more satisfactory. The rate of convictions at magistrates' courts per 10,000 of the population is given below for each of the years 1881, 1891, 1901, 1921, and 1924. Only the more serious offences particularized in the preceding sub-section have been taken into consideration.

MAGISTRATES' COURTS.—SERIOUS CRIME.—RATE OF CONVICTIONS. 1881 TO 1924.

Year.	Convictions per 10,000 Persons.
1881	69.3
1891	44.8
1901	29.1
1921	29.2
1924	24.4

The figures already quoted refer to total convictions, and in respect of individuals necessarily involve a considerable amount of duplication, especially as regards minor offences, such as petty larcenies, etc.

(ii) *Causes of Decrease.* The statistics given above show that there has been a considerable decrease in crime throughout Australia during the period dealt with. The results so far quoted are restricted entirely to the lower or magistrates' courts. There has also been a gratifying decrease in regard to offences tried at the higher courts, as will be seen later.

Attempts have been made to account for this decline: e.g., advance in education, enlightened penological methods, etc. Much depends upon what is meant by education. Many classed in census statistics as "educated" can barely read and write. In this connexion, moreover, it ought not to be forgotten that collaterally with the introduction of ordinary intellectual education certain people have departed from their pristine virtues. In regard to the deterrent effect of punishment, it may be said that in respect of many offences, notably drunkenness, vagrancy, petty larcenies, etc., it appears to be almost negligible. In general, punishment has declined in brutality and severity, and has improved in respect of being based to a greater extent upon a scientific penological system, though in this latter respect there is yet much to be desired. Recent advances in penological methods will be referred to in a subsequent sub-section. Here it will be sufficient to remark that under the old régime, a prisoner on completion of a sentence in gaol was simply turned adrift on society, and in many cases sought his criminal friends, and speedily qualified for readmission to the penitentiary. Frequently, he was goaded to this by mistaken zeal on the part of the police, who took pains to inform employers of the fact of a man having served a sentence in gaol. For a long time any assistance to discharged prisoners was in the hands of private organizations, such as the Salvation Army Prison Gate Brigade, but in some of the States, and notably in New South Wales, the authorities themselves look after the welfare of discharged prisoners in the way of finding work, providing tools, etc. Improvements in the means of communication and identification have been responsible for some of the falling-off noticeable in the criminal returns, the introduction of the Bertillon system having contributed to certainty of identification. In his report for the year 1910 the Inspector-General of Police in New South Wales stated that "criminals have a wholesome dread of the finger-print system, and I have not the slightest doubt that it is one of the principal causes of the diminution of serious crimes." Part of the improvement may no doubt be referred also to the general amelioration in social conditions that has taken place in modern years.

7. **Drunkenness.**—(i) *Cases and Convictions.* The number of cases of drunkenness and the convictions recorded in connexion therewith during the period 1920 to 1924 will be found in the following table:—

DRUNKENNESS.—CASES AND CONVICTIONS, 1920 TO 1924.

State.	1920.		1921.		1922.		1923.		1924.	
	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.
New South Wales	26,080	25,843	20,047	28,702	30,918	30,723	33,118	32,938	31,468	31,260
Victoria	7,154	3,834	7,621	4,334	8,773	5,204	10,131	6,207	9,814	6,033
Queensland ..	12,017	11,712	12,166	11,744	13,014	12,632	12,376	11,832	11,158	11,005
South Australia ..	3,463	3,448	3,465	3,443	3,775	3,764	4,512	4,496	4,972	4,961
Western Australia	4,222	4,185	4,135	4,103	3,740	3,715	3,198	3,165	3,599	3,571
Tasmania ..	536	530	539	531	539	535	506	501	473	464
Northern Territory	(*a*)109	(*a*)109	51	51	112	104	37	37	43	39
Total ..	53,581	49,661	57,024	52,908	60,871	56,677	63,878	59,176	61,827	57,333

(*a*) For 1919. Returns for 1920 not available.

The number of convictions is, as might naturally be expected, almost identical with the number of cases. Victoria, however, is an exception, but in this State it is explained that offenders are generally discharged on a first appearance, and no conviction is recorded, a similar procedure being also adopted in the case of those arrested on Saturday and detained in custody till Monday. The logic of excluding these cases from the list of convictions is open to doubt.

(ii) *Convictions per 10,000 of Population.* The convictions for drunkenness per 10,000 of the population during each of the years from 1920 to 1924 are given hereunder :—

DRUNKENNESS.—CONVICTIONS PER 10,000 INHABITANTS, 1920 TO 1924.

State.	1920.	1921.	1922.	1923.	1924.
New South Wales	124.9	136.0	142.7	148.9	140.0
Victoria	25.4	28.2	33.1	38.2	36.7
Queensland	157.0	153.9	161.7	145.9	133.4
South Australia	70.9	69.2	74.4	85.7	93.7
Western Australia	126.8	122.9	109.4	89.5	99.3
Tasmania	25.2	24.9	24.9	22.9	21.6
Northern Territory	258.8	130.6	284.7	104.1	108.2
Total	92.7	96.9	101.8	102.9	98.7

The convictions for drunkenness taken by themselves are not an altogether satisfactory test of the relative sobriety of the inhabitants of each State, inasmuch as several important factors must be taken into consideration. The age and sex constitution of the people, for example, is by no means identical in all the States. (Owing to the smallness of the population the figures for the Northern Territory are, of course, abnormal.) The avocations of the people affect the result, since persons engaged in strenuous callings are, on the whole, more likely to indulge in alcoholic stimulants than those employed in less arduous ones. The distribution of the population is also a factor, the likelihood of arrest or summons for drunkenness obviously being greater in the more densely populated regions, while allowance must be made for the attitude of the magistracy, the police, and the public generally in regard to the offence. Due account also must be taken of the effect of legislation dealing with the limitation of hours during which liquor may be sold in hotels.

(iii) *Consumption of Intoxicants.* It is not unusual to supplement statistics of drunkenness by furnishing also the relative consumption of alcoholic beverages. Deductions drawn therefrom will be very misleading if they fail to take into account also the consumption of non-intoxicating beverages such as tea and coffee, and the general habits of the people. Throughout the greater part of Europe, tea and coffee are consumed but sparingly, while Australia, as is well known, is one of the greatest tea-drinking countries of the world.

The following table shows the consumption of spirits, wine, and beer per head of the population in Australia during each year of the quinquennium 1921–25 :—

INTOXICANTS, CONSUMPTION.—AUSTRALIA, 1921 TO 1925.

Year.	Consumption per Head of Population.		
	Spirits.	Wine.	Beer.
	Imp. Galls.	Imp. Galls.	Imp. Galls.
1920–21	0.36	0.50	12.20
1921–22	0.36	0.50	11.49
1922–23	0.39	0.50	11.30
1923–24	0.43	0.50	11.08
1924–25	0.43	0.50	11.15

The figures in regard to wine are approximate, and are probably to some extent understated, as it is impossible to ascertain the exact quantity of the production which goes into consumption in the form of wine.

(iv) *Treatment of Drunkenness.* (*a*) *General.* Though the problem of the correct method of dealing with dipsomania is by no means an easy one, it seems fairly clear that the present plan of bringing offenders before magistrates, and subjecting them to the penalty of imprisonment or fine, has little deterrent effect, as the same offenders are constantly reappearing before the courts. Further, the casting of an inebriate into prison, and placing him in his weakened state in the company of professional malefactors, certainly lowers his self-respect, and doubtless tends to swell the ranks of criminals. Examination of the prison records in New South Wales some years ago disclosed the fact that over 40 per cent. of the gaol population had commenced their criminal career with a charge of drunkenness. During the last few years the dangers of moral contamination in this way have been more accurately appreciated, and a system of classification of prisoners has been adopted whereby the petty offender is as far as possible kept from association with the more evilly-disposed. The Comptroller-General of Prisons in Queensland stated in his Report for the year 1907 that "the drunken habit in many cases is merely one of the many symptoms which jointly indicate the existence of a graver condition than simple habitual drunkenness."

(*b*) *Remedial.* Legislation has been passed in each State, providing for the commitment of inebriates to special Government institutions. The laws in the various States are as follows :—New South Wales, Inebriates Act 1912; Victoria, Inebriates Act 1915 and 1923; Queensland, Inebriate Institutions Act 1896; South Australia, Inebriates Acts 1908, 1913, and 1920; Western Australia, Inebriates Acts 1912 and 1919; Tasmania, Inebriates Acts 1885, Inebriate Hospitals Act 1892. Curative work was first undertaken by the Government of New South Wales in 1907. In most cases the institutes are connected with the gaols, and, naturally, custodial measures are still a strong feature in their management; nevertheless, the results of remedial measures have been encouraging.

8. **First Offenders.**—In all the States statutes dealing with first offenders have been in force for some years, the dates of passing the Acts being as follows :—New South Wales, 1894; Victoria, 1890, 1908, and 1915 (Crimes Act, sec. 340); Queensland, 1887; South Australia, 1887 and 1913; Western Australia, 1892; Tasmania, 1886. The method of procedure is practically the same in all cases, *i.e.*, with regard to most first offenders the magistrate or judge is empowered to allow the offender to go free on recognizances being entered into for his good behaviour for a certain period. In practice, this humane law has been found to work excellently, very few of those to whom its provisions have been extended having been found to relapse into crime.

9. **Children's Courts.**—Special courts for the trial of juvenile offenders have been established in New South Wales, Victoria, Western Australia, Tasmania, and New Zealand within the last few years, while Children's Courts, although not under that name, are practically provided for by the State Children's Acts of 1895 and 1900 in South Australia. The object of these Courts is to avoid, as far as possible, the unpleasant surroundings of the ordinary police court.

10. **Committals to Superior Courts.**—(i) *General.* In a previous sub-section it has been pointed out that comparisons of criminality based on a consideration of the total returns from magistrates' courts are somewhat inadequate, seeing that the figures include numbers of cases which are merely technical breaches of laws having in some instances a purely local significance. The committals to higher courts give a better basis of comparison, although even in this connexion allowance must be made for the want of uniformity in jurisdiction. The table below gives the number of committals in each year from 1920 to 1924, with the rate of such committals per 10,000 of the population.

COMMITTALS TO SUPERIOR COURTS, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
New South Wales ..	No.	2,239	2,594	2,495	2,654	2,327
	Rate	10.8	12.3	11.6	12.1	10.4
Victoria	No.	795	776	733	634	602
	Rate	5.3	5.0	4.7	3.9	3.7
Queensland	No.	309	328	331	341	233
	Rate	4.1	4.3	4.2	4.2	2.8
South Australia ..	No.	123	121	146	193	176
	Rate	2.5	2.4	2.9	3.7	3.3
Western Australia ..	No.	112	120	68	92	92
	Rate	3.4	3.6	2.0	2.6	2.6
Tasmania	No.	72	88	79	78	59
	Rate	3.4	4.1	3.7	3.6	2.7
Northern Territory ..	No.	3	8	4	3	5
	Rate	7.1	20.5	10.9	8.3	13.9
Total	No.	3,653	4,035	3,856	3,995	3,494
	Rate	6.8	7.4	6.9	7.0	6.0

(ii) *Decrease in Rate since 1861.* The above figures show that the rate of committals for serious crime has decreased by 12 per cent. during the last five years, but if the comparison be carried further back, it will be found that there has been a considerable improvement. This will be evident from an examination of the following figures, which show the rate of committals per 10,000 persons in Australia at various periods since 1861 :—

RATE OF COMMITTALS, AUSTRALIA, 1861 TO 1923.

Year	1861.	1871.	1881.	1891.	1901.	1911.	1921.	1924.
Committals per 10,000 inhabitants	22	14	12	11	8	6	7	6

The decline in proportion to population since 1861 has therefore been about 73 per cent.

§ 3. Superior Courts.

1. **Convictions at Superior Courts.**—The number of convictions at superior courts with the rate per 10,000 of the population is given below for each of the years 1920 to 1924 :—

SUPERIOR COURTS.—CONVICTIONS, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
New South Wales ..	No.	1,027	1,111	1,040	1,059	1,002
	Rate	5.0	5.3	4.8	4.8	4.5
Victoria	No.	461	520	463	400	401
	Rate	3.0	3.4	2.9	2.5	2.4
Queensland	No.	302	338	378	278	222
	Rate	4.0	4.4	4.8	3.5	2.7
South Australia ..	No.	83	97	113	120	104
	Rate	1.7	2.0	2.2	2.3	2.0
Western Australia ..	No.	69	70	40	80	64
	Rate	2.1	2.1	1.2	2.3	1.8
Tasmania	No.	51	57	55	56	53
	Rate	2.4	2.7	2.6	2.6	2.5
Northern Territory ..	No.	..	3	3	2	1
	Rate	..	7.7	8.2	5.5	2.8
Total	No.	1,993	2,196	2,092	1,995	1,847
	Rate	3.7	4.0	3.8	3.5	3.2

The rate in 1901 was 4.6 per 10,000, and the decrease to the end of 1924 was, therefore, about 31 per cent.

In considering the above figures allowance must be made for the various factors enumerated in a preceding paragraph. South Australia, Western Australia, and Tasmania, it will be noted, show the smallest proportion of serious crime, while the rates for New South Wales and the Northern Territory are the highest, the figures for the latter, however, owing to the particular conditions prevailing there being abnormal.

2. **Offences for which Convictions were recorded at Superior Courts.**—In the following table will be found a classification of the principal offences for which persons were convicted at the higher courts during each year of the period 1920 to 1924. Owing to lack of

uniformity in the presentation of the returns the information is confined to the chief offences against the person only.

SUPERIOR COURTS.—CONVICTIONS, SERIOUS CRIME, AUSTRALIA, 1920 TO 1924.

Offences.	1920.	1921.	1922.	1923.	1924.
Murder, and attempts at ..	20	29	36	15	21
Manslaughter	18	17	10	15	13
Rape, and attempts at ..	7	8	5	9	5
Other offences against females ..	69	87	95	130	100
,, ,, ,, the person	223	235	240	246	217
Total	337	376	386	415	356

The total convictions for similar offences in 1901 amounted to 432, the decline during the period 1901 to 1924 amounting therefore to about 18 per cent.

3. **Habitual Offenders.**—In New South Wales the Habitual Criminals Act of 1905 gives judges the power of declaring a prisoner, after a certain number of sentences, to be an habitual criminal, and as such to be detained until, in the opinion of the authorities, he is fit to be at large. At the end of 1924 there were 38 persons in prison under this Act. Since the passing of the Act, 104 offenders, including 1 female, have been declared to be habitual criminals. So far the indeterminate sentence has been applied to the older hardened offender, but under the Crimes Amendment Act of 1924 when an accused person has been convicted on more than three occasions before a magistrate, the magistrate may direct an application to be made by the Clerk of the Peace to a Judge, to have the person so convicted declared an habitual offender. The Indeterminate Sentences Act came into force in Victoria in July, 1908, and up to the end of June, 1925, 983 prisoners had been released on probation or parole. Of this number, 354 were re-convicted or returned for not observing the conditions of release, and 629 have not returned to prison. Of the latter, 196 are still on probation or parole, and 442 have completed their probation and are out of the Board's control. At the 30th June, 1925, the number under indeterminate detention was 162. The Criminal Code Amendment Act of 1914, which makes provision for the detention and control of habitual criminals, was assented to in Queensland on the 3rd December, 1914, and the first cases in connexion therewith were dealt with in 1922, when 2 prisoners were declared to be habitual criminals. Up to the end of 1924, 15 prisoners had been declared habitual criminals, of whom 3 had completed the definite portion of their sentence, but none of them has been released. The provisions of the Habitual Criminals Amendment Act of 1907 were put into force in South Australia in 1909, and 24 criminals had been declared to be habitual offenders up to the end of 1924. Of these, 23 had been released after serving the indeterminate portion, and 1 was serving the definite portion of his sentence. In Western Australia, under the Criminal Code Amendment Act of 1918, power is given to declare a prisoner after a certain number of convictions to be an habitual criminal. The number under preventive detention on the 30th June, 1925, was 37, and the total number dealt with since the passing of the Act was 141. During the period in which the Habitual Criminals and Offenders Act of 1907 (now Indeterminate Sentences Act 1921) has been in force in Tasmania, 141 prisoners have been released under its provisions, and the results, according to the Sheriff, have been satisfactory, only four prisoners having defaulted.

The Comptroller-General of Prisons in New South Wales points out that the system has exercised a wholesome deterrent effect on the criminal who is not a prisoner, while the Indeterminate Sentence Board in Victoria states that it has become impressed with the advantages which this form of sentence offers, both from a reformatory and deterrent standpoint, over the ordinary sentence. In New South Wales it is stated that while old associations and habits have in some cases proved too strong for the released "habitual," many of them have done well, and, generally, there is hope of reformation in the average prisoner other than the sexual offender.

4. **Capital Punishment.**—The table below gives the number of executions in each State during the period 1920 to 1924 :—

EXECUTIONS, 1920 TO 1924.

State.	1920.	1921.	1922.	1923.	1924.
New South Wales	..	..	..	..	2
Victoria	..	..	1	..	1
Queensland	..	..	..	..	..
South Australia	1	..	..	..	..
Western Australia	..	..	1	..	..
Tasmania	..	..	1	..	..
Total	1	..	3	..	3

In the early days of the history of Australia the penalty of death was attached to a large number of offences, many of which at the present time would be dealt with in the lower or magistrates' courts. With the growth of settlement, and the general amelioration in social and moral conditions, the list was, however, considerably curtailed, and the existing tendency is practically to restrict death sentences to cases of murder. It may be remarked that in cases of rape, which is a capital offence in some of the Australian States, the penalty has been but sparingly inflicted during the last few years. Juries are reputed to be loth to convict on this charge, owing to the uncertainty whether sentence of death will be pronounced.

Under the Criminal Code Amendment Act of 1922, capital punishment was abolished in Queensland.

During the period 1861 to 1880 the annual average number of executions in Australia was 9, from 1881 to 1900 the average was 6, for the period 1901 to 1910 the figure was 4, from 1911 to 1920 it was 2, while the average for the last five years was 1.

§ 4. Prisons.

1. **Prison Accommodation and Prisoners, 1924.**—The table below shows the number of prisons in each State, the accommodation therein, and the number of prisoners in confinement at the end of 1924 :—

PRISON ACCOMMODATION AND PRISONERS, 1924.

State.	Number of Prisons.	Accommodation in— Separate Cells.	Accommodation in— Wards.	Prisoners at End of Year.
New South Wales	24	(a) 2,510	..	1,411
Victoria	15	1,228	420	749
Queensland	9	573	322	220
South Australia	13	692	467	250
Western Australia	22	669	848	201
Tasmania	2	145	5	74
Northern Territory	3	..	67	13
Total	88	5,817	2,129	2,928

(a) Total accommodation.

The figures refer to prisoners under sentence and are exclusive of aborigines.

2. **Prisoners in Gaol, 1920 to 1924.**—The number of prisoners in gaol at the 31st December in each of the years 1920 to 1924 is given below. As stated above, the figures refer to prisoners under sentence, and are exclusive of aborigines. A separate line is added in each instance showing the proportion per 10,000 of the population.

PRISONERS IN GAOL, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
New South Wales ..	Number ..	1,128	1,273	1,373	1,339	1,411
	Proportion	5.4	6.0	6.4	6.1	6.3
Victoria	Number ..	700	733	719	765	749
	Proportion	4.6	4.8	4.6	4.8	4.6
Queensland	Number ..	275	309	331	279	230
	Proportion	3.7	4.1	4.2	3.5	2.8
South Australia ..	Number ..	229	252	265	267	250
	Proportion	4.7	5.1	5.2	5.2	4.7
Western Australia	Number ..	167	211	196	226	201
	Proportion	5.1	6.3	5.8	6.5	5.6
Tasmania	Number ..	63	95	62	79	74
	Proportion	3.0	4.5	2.9	3.7	3.4
Northern Territory ..	Number ..	3	4	4	2	13
	Proportion	7.1	10.2	10.9	5.5	36.1
Total ..	Number ..	2,565	2,877	2,950	2,957	2,928
	Proportion	4.8	5.3	5.3	5.2	5.0

The proportion to population of prisoners in gaol under sentence has risen by about 4 per cent. for Australia during the last five years, but, if the comparison be carried farther back, the position is seen to be more favourable, the proportion in 1891 being as high as 16 per 10,000.

3. Improvement of Penological Methods.—(i) *New South Wales.* During recent years Australia, in common with most other civilized countries, has introduced considerable modifications and improvements in methods of prison management. Under the old system, punishment partook more or less of the character of reprisal for wrongdoing, and the idea of constituting the prison as a reformative agency was in the background. But in recent years there has been an earnest attempt at effecting a moral reformation in the unfortunates who lapse into crime. This aspect of prison management has been specially prominent in New South Wales. A short account of the reorganization of the prison system in this State appears in preceding Year Books (see No. 5, p. 922), but considerations of space preclude its repetition here. At the present time it is found that good results have followed the principles of scientific classification and restricted association of prisoners, together with the provision of separate institutions for the treatment of inebriates. Until recently the prison authorities were confronted with a difficult problem arising from the fact that so little could be done in the case of short-sentenced prisoners, but the passing of the Crimes Act of 1924, alluded to previously, under which such persons could, after repeated convictions, be declared "habituals," and as such liable to reformative detention, will, it is hoped, lead to considerable improvement. Special efforts are put forward to provide reproductive work of a regular and intelligent nature, and for the year 1924 the value of the prisoners' labour amounted to £69,000, as compared with £35,000 in 1913. Very few skilled tradesmen are received into gaol, the great majority of prisoners being unskilled at any trade, and many being drunkards, vagrants, and physical and moral degenerates. At the chief penitentiaries for males and females in the metropolis, a careful classification of prisoners is carried out, and provision is made for the treatment of special cases at some of the larger country gaols. Young first offenders are employed at the Emu Plains Prison Farm, and first offenders over the age of 25 years are drafted to the Prisoners' Afforestation Camp at Tuncurry, on the Manning River. This institution, which was opened in 1911, has given very satisfactory results. The total area set apart for afforestation is 3,380 acres, of which 1,750 acres have been planted. About 170,000 pine seedlings are raised each year, and nearly 2,000,000 trees, some up to 50 feet in height, are flourishing. The Shaftesbury Inebriate Institution was established in 1915 for the treatment of non-criminal inebriates, and in the following year provision was made for the accommodation and treatment of voluntary paying guests. Suitable cases from the Long Bay prison are transferred to the Shaftesbury Institution.

In many instances prisoners received into the gaols are found to be suffering from contagious diseases, and, under the Prisoners Detention Act such persons may be detained until cured.

Amongst other improvements introduced during the last few years were the relieving of the monotony of non-working hours at week-ends by the provision of concerts, lectures, and suitable picture shows at the principal gaols, by more open-air exercise on Saturday afternoons and Sundays, and by the supply of a greater variety of interesting books and magazines to the prison libraries. These libraries now contain over 22,000 volumes. Prisoners are encouraged to take up courses of study likely to be of service to them on their discharge, and, within reason, the text-books required are purchased for their use. As the Comptroller-General points out, these changes have been brought about, not from sympathy with the criminal, but as ordinary necessities to the wholesome functioning of the mind. In 1924 a revised dietary scale came into operation, under which prisoners are supplied with greater quantity and greater variety of food.

In 1902 the system of finger-print identification of criminals was introduced, and in the following year bureaux were established in the various States for the exchange of records. Very successful results have attended the introduction of the system.

Allusion may be made here to the excellent work performed by the Prisoners' Aid Association, which has branches in the country towns where there are prisons. Members of the organization meet prisoners on their discharge, help in restoring hopeful cases to reputable relatives and friends, assist in obtaining situations, and generally maintain a friendly supervision over those in need of assistance.

(ii) *Victoria.* In Victoria there is an excellent system of classification and allocation of prisoners in various grades to different gaols, while at the important penal establishment at Pentridge careful segregation into several classes is carried out. First offenders are placed in the "special" division, and it is stated that out of 955 prisoners in this class discharged from Pentridge during the decade ending in 1924 only 89 are known to have been reconvicted. In common with the other States the latest humane methods of accommodation and prison treatment have for some time been employed. The younger prisoners spend a portion of each week day at school, and evening school or recreational classes are held from 7 p.m. to 9 p.m. at the Reformatory. Voluntary classes for older prisoners have been formed by the Prisoners' Aid Society. In addition, where the necessary arrangements can be made, well-behaved prisoners are allowed to take correspondence lessons from outside insitutions. An afforestation camp known as McLeod Settlement, French Island, was opened in 1916, and at the 31st December, 1924, there were 24 inmates. In addition to the work of afforestation, portion of the land has been laid down in crops, and some attention given to poultry and pig-keeping. It is stated that the experiment has resulted in improvement both in demeanour and physique of prisoners, and in many cases has led to a return to honest citizenship. A farm has been established about 3 miles from the prison at Castlemaine with provision for 13 inmates, while others are taken to and fro daily. The number in confinement at the end of December, 1924, was 62. The orchard planted in connexion with the farm contains about 1,000 fruit trees. A large number of poultry is kept, and provision has been made for practical instruction in carpentering and other work which will help in securing employment for prisoners on release.

The results of intelligence tests carried out in 1924 at the Castlemaine Reformatory show a considerable amount of mental deficiency, particularly amongst sexual offenders. Further tests in regard to larger numbers of the latter class will, however, be necessary to determine whether mental deficiency is characteristic of this class.

Under the Venereal Diseases Act, prisoners where necessary receive medical treatment, and after release the treatment where required is continued outside the prison at places gazetted by the Health Department. Provision is also made for dental attention where necessary, the treatment being free if the prisoner is unable to pay or to make arrangements for payment.

In their Report for the year 1924-25, the Indeterminate Sentences Board advocate the application of the indeterminate sentence in the case of the habitual petty offender.

Aid is given to discharged prisoners by the Salvation Army and by various church organizations and welfare committees.

(iii) *Queensland.* Queensland prisons have been considerably modernized during the last few years. Amongst recent reforms may be mentioned the provision of a separate institution at Brisbane for long-sentence prisoners, and the extension of the principle of classification and separation. Juvenile offenders, i.e., those between the ages of 16 and 21 years, are kept apart from other prisoners and treated in accordance with the latest reformative methods. Many of the prisoners received, both in the adult and junior stage, come from the ranks of the idle, the thriftless, and the unskilled, and efforts are made to teach these some useful calling, and to help them to form habits of industry. It has been found in Queensland, as is the case elsewhere, that very few skilled workmen are criminals. The penal establishment at St. Helena has been converted into a farm colony, and well conducted prisoners receive special treatment there during the latter stages of their sentences. Greater facilities have been provided for the instruction of prisoners in trades which will afford them a means of earning a livelihood on their release, and the prison libraries have been replenished with useful and interesting literature. The cells in the principal prisons have been provided with lights, and prisoners are allowed to read and study up to a reasonable hour at night. Under the provisions of the Health Act, prisoners suffering from venereal disease may be detained until danger of infection has ceased.

Excellent work in aid of discharged prisoners is carried on by the Salvation Army, while the " William Powell Home ," through its secretary, renders valuable service. In the Report for the year 1924 attention is again drawn to the need of an organized State system of assisting released prisoners.

(iv) *South Australia.*—The present system of gaol administration was drafted mainly on English and European lines by the late W. R. Boothby, C.M.G., and has since been as far as possible adapted to modern penological procedure. At the Yatala Labour Prison, which is the largest in the State, the number in confinement on the 31st December, 1924, was 143. The prisoners are graded into three classes—first offenders, second offenders, and old offenders, the various classes being kept apart. During the year 1924 new regulations were introduced chiefly with the view to encourage prisoners to take greater interest in the results of their labour. Industrious prisoners are able to earn monetary payment, and are allowed to remit a portion of their earnings to dependents in need of pecuniary help. A more liberal dietary scale has been introduced, and well-conducted prisoners are allowed to supplement this from their earnings. Permits are granted to prisoners to earn money by working in their cells at night. Facilities are afforded to help prisoners who desire to improve themselves educationally, and greater provision has been made for recreation. Provision is made for the special treatment of inebriates at the Adelaide and Gladstone gaols.

Various religious organizations devote attention to the periodical visiting of prisoners in the gaols, while fine work is done by the Prisoners' Aid Association in helping released prisoners to obtain employment, or return to their homes in other States.

(v) *Western Australia.* A Royal Commission in 1911 recommended the adoption of various reforms in connexion with the prison system of Western Australia. The bulk of these were carried out, and included, amongst other things, an extension of the principle of separate treatment, improvement in prisoners' dietary scale, more satisfactory arrangements in regard to remission of sentences, and better conditions in regard to hours of labour, leave of absence, etc., for the staff. Amongst other improvements introduced may be mentioned the grant of an eight hours' day to officers, enlargement and improved hygiene of cells, additional library facilities, assistance to discharged prisoners by provision of railway passes and monetary aid, appointment of committees to look after the welfare of discharged prisoners, and the remodelling of the " mark " system. Under the Prisons Act Amendment Act of 1918 a portion of Fremantle Prison was set aside as a reformatory prison in 1919, and first offenders are kept separate from other prisoners. It is pointed out, however, that reformative treatment is greatly hampered by the lack of a suitable institution away from the ordinary gaol surroundings. In common with other penologists the Comptroller-General alludes to the weakness of the definite sentence, and points to the necessity for skilled consideration of all the circumstances that have led to wrongdoing, coupled with skilled medical, psychological, and penological treatment of the prisoner whilst undergoing confinement. The Prison Gate Committee affords assistance to discharged prisoners by finding work and helping in other ways.

(vi) *Tasmania.* The number of convicted prisoners in confinement in Tasmanian gaols at the end of 1924 was 74. The completion of alterations to the Hobart gaol has facilitated the classification of offenders, and afforded greater opportunities for teaching trades. Youthful offenders are kept apart from ordinary prisoners.

(vii) *Psychology of the Criminal.* The Director of the State Psychological Clinic at Hobart recently stated that an examination of the prisoners in Hobart Gaol showed that nearly two-thirds were " deviates " from the normal, and he stressed the necessity for devising means for the discovery and possible correction of abnormal tendencies in childhood. He alluded also to the connexion between brain development and mental development, and pointed out that in Hobart Gaol 84 per cent. of the defectives were small-headed.

§ 5. Civil Courts.

1. **Lower Courts.**—The transactions of the lower courts on the civil side during each of the last five years are given in the table hereunder. As pointed out previously, the jurisdiction of the courts is by no means uniform in the various States :—

LOWER COURTS.—CIVIL CASES, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
New South Wales ..	Cases No.	34,475	37,557	38,828	48,760	53,997
	Amount £	111,531	145.176	163,803	198,558	220,442
Victoria ..	Cases No.	38,200	45,319	47,140	58,502	73,264
	Amount £	158,198	202,606	295,697	413,417	497,833
Queensland ..	Cases No.	10,428	14,339	16,023	18,329	17,607
	Amount £	58,476	84.277	122,684	155,314	178,018
South Australia ..	Cases No.	18,030	20,334	23,030	25,839	29,101
	Amount £	73,505	103,715	123,569	142,217	182,930
Western Australia ..	Cases No.	12,306	15,240	15,991	16,649	18,705
	Amount £	46.765	63,162	71,457	76,208	91,100
Tasmania	Cases No.	4,954	1,442	7,246	7,879	7,950
	Amount £	34,329	36,571	59,137	57,014	62,234
Total ..	Cases No.	118,493	134,231	148,258	175,958	200,624
	Amount £	482,804	635,507	836,347	1,042,728	1,232,557

The figures just given represent the returns from Petty Sessions Courts in New South Wales and Victoria, the Petty Debts Courts in Queensland, the Local Courts of South Australia and Western Australia, and the Courts of Requests in Tasmania.

2. **Superior Courts.**—In the next table will be found the transactions on the civil side in the Superior Courts during each of the years 1920 to 1924.

The New South Wales returns refer to the total amounts sued for, and not the sums actually awarded after trial in the District Courts, and are exclusive of judgments signed in the Supreme Court, for which the amount is not available.

SUPERIOR COURTS.—CIVIL CASES, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
New South Wales ..	Causes No.	1,148	1,344	1,386	1,557	1,618
	Amount £	377,419	475,816	500,862	578,774	259,327
Victoria.. ..	Causes No.	760	906	863	996	1,041
	Amount £	122,840	226,736	213,597	237,145	303,140
Queensland ..	Causes No.	225	231	187	245	225
	Amount £	19,707	32,513	21,914	17,645	9,861
South Australia ..	Causes No.	39	52	55	60	146
	Amount £	16,938	5,673	10,300	3,923	7,654
Western Australia ..	Causes No.	174	288	195	205	272
	Amount £	28,890	54.339	40,119	34,207	37,495
Tasmania	Causes No.	145	246	474	525	548
	Amount £	14,507	13,651	28,952	30,127	42,624
Total ..	Causes No.	2,491	3,067	3,160	3,588	3,850
	Amount £	580,301	808,728	815,744	901,821	660,101

As stated previously the figures for New South Wales are exclusive of judgments signed, Supreme Court, the amounts thereof not being available.

3. **Divorces and Judicial Separations.**—The number of divorces and judicial separations in each State during the period 1920 to 1924 is shown below. The figures refer in the case of divorces to decrees made absolute in each year and include decrees for nullity of marriage.

DIVORCES AND JUDICIAL SEPARATIONS, 1920 TO 1924.

State.	1920.		1921.		1922.		1923.		1924.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
New South Wales	556	11	789	18	684	9	739	13	838	7
Victoria	373	2	388	1	376	2	429	2	407	1
Queensland	45	1	56	2	47	..	75	2	105	..
South Australia	32	2	88	1	76	..	90	..	77	..
Western Australia	128	..	119	..	110	1	101	..	89	..
Tasmania	18	..	40	..	33	..	29	..	20	..
Northern Territory ..	..	..	..	..	..	..	..	..	..	..
Total	1,152	16	1,480	22	1,326	12	1,463	17	1,536	8

The figures for Western Australia for the last four years have been considerably amended since last year, consequent on alterations in the Supreme Court returns.

The average annual number of divorces and judicial separations in Australia at decennial periods from 1871 to 1920 is as follows :—

DIVORCES AND JUDICIAL SEPARATIONS.—AUSTRALIA, 1871 TO 1920.

	1871–1880.	1831–90.	1891–1900.	1901–10.	1911–20.
Averages	29	70	358	401	707

For the last five years the average was 1,406.

The bulk of the divorces and judicial separations refer to New South Wales and Victoria, the Acts of 1899 and 1889 in the respective States having made the separation of the marriage tie comparatively easy. In some statistical works it is customary to compare the divorces in any year with the marriages in the same year. The comparison is, however, quite valueless, as there is no necessary connexion between the figures.

4. **Probates.**—The number of probates and letters of administration granted, together with the value of the estates concerned, are given below for each State for the period 1920 to 1924 :—

PROBATES AND LETTERS OF ADMINISTRATION, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
New South Wales ..	Number	5,737	5,461	5,681	6,281	6,410
	Value £	12,265,044	13,895,765	15,441,378	16,429,860	17,970,385
Victoria	Number	5,837	5,769	5,445	6,283	5,540
	Value £	14,672,239	12,554,865	12,641,263	15,070,725	12,831,268
Queensland	Number	1,027	1,130	1,002	1,073	922
	Value £	3,594,844	4,039,379	3,591,531	3,594,467	3,258,981
South Australia ..	Number	1,844	1,784	1,786	1,823	2,001
	Value £	3,831,914	3,115,106	3,683,202	4,043,547	4,065,615
Western Australia ..	Number	948	1,059	942	907	949
	Value £	1,438,192	1,854,099	979,214	1,358,846	1,639,479
Tasmania	Number	517	518	545	569	622
	Value £	1,095,536	1,207,252	1,211,764	1,283,638	1,281,006
Northern Territory ..	Number	(*a*)	10	27	19	20
	Value £	..	3,864	5,411	6,006	27,953
Total	Number	15,910	15,731	15,428	16,955	16,464
	Value £	36,897,769	36,670,330	37,553,763	41,787,089	41,074,687

(*a*) Not available.

5. **Bankruptcies.**—(i) *General.* The returns in bankruptcy during each of the last five years are given in the following table.

For several reasons comparisons drawn from these figures are of little value. In the first place, the statements of assets and liabilities are notably unsatisfactory, particularly in regard to the former. Then, again, there is wide dissimilarity in regard to the laws in force in the various States and the methods of procedure thereunder in connexion with bankruptcy. Further, there are no means of knowing how many persons in each State who were in a bankrupt condition made private arrangements with their creditors either personally or by intervention of a solicitor. The figures quoted in the table exclude private arrangements in Victoria, South Australia, and Western Australia, and the liquidations in Queensland and Tasmania.

BANKRUPTCIES, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
New South Wales ..	Number ..	344	394	481	668	668
	Liabilities £	204,594	311,900	440,856	659,314	742,079
	Assets £	139,550	166,457	251,185	282,657	303,315
Victoria	Number ..	186	300	322	414	520
	Liabilities £	154,658	180,044	349,118	323,540	504,678
	Assets £	53,229	92,048	189,016	152,602	311,290
Queensland.. ..	Number ..	118	150	148	204	247
	Liabilities £	73,853	65,603	90,790	109,211	184,979
	Assets £	57,904	18,760	42,012	55,185	76,462
South Australia ..	Number ..	60	67	110	137	167
	Liabilities £	81,610	121,987	158,987	173,632	262,959
	Assets £	54,502	96,658	102,738	116,333	167,982
Western Australia ..	Number ..	25	30	36	41	44
	Liabilities £	46,381	43,944	36,510	50,449	36,488
	Assets £	41,875	35,899	16,961	24,018	23,388
Tasmania	Number ..	..	6	1	4	3
	Liabilities £	..	1,829	1,170	3,148	1,705
	Assets £	..	1,599	..	535	692
Northern Territory ..	Number ..	..	..	2	2	1
	Liabilities £	..	..	175	141	(a)
	Assets £	..	..	..	40	(a)
Total	Number ..	733	947	1,100	1,470	1,650
	Liabilities £	561,096	725,307	1,077,606	1,319,435	1,732,888
	Assets £	347,060	411,421	601,912	631,370	883,129

(a) Not stated.

(ii) *Deeds of Arrangement, etc.* The figures given above are, as explained, exclusive of private arrangements. For New South Wales the returns show that a composition was effected in 1 case only in 1924. In Victoria during 1924 the deeds of arrangement numbered 232, the declared liabilities and assets being £350,350 and £263,124 respectively. Liquidations under the Insolvency Act in Queensland numbered 15, the total liabilities and assets amounting to £29,141 and £17,892 respectively. In South Australia, 174 compositions were arranged during the year. Under the Bankruptcy Amendment Act of 1898, 13 compositions, 10 schemes of arrangement, and 69 deeds of assignment were made in Western Australia. In Tasmania, 23 liquidations involving liabilities £13,541 and assets £5,527, and 18 compositions with liabilities £4,448 and assets £1,074, were arranged during 1924.

6. **High Court of Australia.**—Under the provisions of section 71 of the Commonwealth Constitution Act, the judicial power of the Commonwealth is vested in a Federal Supreme Court, called the High Court of Australia, and in such other courts as the Parliament creates or invests with federal jurisdiction. The Federal High Court possesses both original and appellate jurisdiction. The powers of the Court are defined in Chapter III. of the Constitution Act and in the Judiciary Acts of 1903–20. At present the Court consists of a Chief Justice and six other judges. Sittings of the Court are held in the capitals of the various States as occasion may require. The following statement shows the transactions of the High Court for the quinquennium 1920–24 :—

COMMONWEALTH HIGH COURT.—TRANSACTIONS, 1920 TO 1924.

Items.	1920.	1921.	1922.	1923.	1924.
I. ORIGINAL JURISDICTION.					
Number of writs issued	123	155	183	82	88
Number of causes entered for trial ..	20	24	30	15	7
Verdicts for plaintiffs	6	13	6	5	4
Verdicts for defendants	5	4	9	1	1
Otherwise disposed of	31	22	61	9	2
Amount of judgments	£6,907	£15,403	£18,579	£5,525	£23,724
II. APPELLATE JURISDICTION.					
Number of appeals set down for hearing	65	68	96	72	101
Number allowed	20	31	39	27	39
Number dismissed	31	24	48	35	46
Otherwise disposed of	14	13	9	10	16
III. AMOUNT OF FEES COLLECTED.					
Amount in each year	£675	£742	£802	£586	£789

During the year 1924 the Court dealt also with other matters as follows :—

Appeals from Assessments under the Taxation Assessment Acts ..	13
Special cases stated for the opinion of the Full Court	20
Applications for Prohibition	2

7. **Commonwealth Court of Conciliation and Arbitration.**—A more or less detailed statement regarding the operation of this Court, which was established under the provisions of the Commonwealth Conciliation and Arbitration Act of 1904–26, will be found in Chapter XIII.

§ 6. Cost of Administration of Justice.

1. **Expenditure by the States.**—The table below shows the expenditure from Consolidated Revenue during each of the last five years in connexion with the administration of justice in each of the States. Expenditure on police and on prisons are given on separate lines. With regard to the figures quoted for " other " expenditure, a slight allowance has to be made for the fact that some extraneous expenditure has been included which it was found impossible to disentangle from the total, but the amount is in no instance large.

STATE EXPENDITURE ON JUSTICE, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
		£	£	£	£	£
New South Wales ..	Police	1,101,767	1,150,323	1,205,557	1,219,244	1,317,320
	Gaols	113,882	120,136	145,887	138,137	150,052
	Other	370,061	400,943	395,691	415,420	428,437
Victoria	Police	577,407	579,351	600,856	755,698	741,126
	Gaols	75,986	74,161	80,363	101,233	99,732
	Other	227,190	224,670	233,452	252,995	259,626
Queensland ..	Police	476,153	458,955	455,519	461,446	497,484
	Gaols	40,190	36,236	34,068	34,635	38,239
	Other	149,068	143,592	144,341	149,492	170,350
South Australia ..	Police	197,157	211,428	216,109	221,635	246,646
	Gaols	31,940	33,359	34,520	37,388	41,257
	Other	52,500	54,129	50,459	64,549	65,447
Western Australia..	Police	186,717	184,245	181,893	185,945	193,461
	Gaols	30,417	28,715	27,440	26,102	25,970
	Other	97,779	89,987	91,605	99,250	92,816
Tasmania ..	Police	79,372	79,105	77,096	78,313	81,318
	Gaols	9,774	10,097	9,643	9,475	9,426
	Other	33,322	34,114	32,921	33,487	38,381
Northern Territory (a)	Police	12,970	15,520	16,011	16,070	17,923
	Gaols	3,857	4,171	4,403	4,148	4,469
	Other	3,396	3,289	2,664	2,611	3,078
Total ..	Police	2,631,543	2,678,927	2,753,041	2,938,351	3,095,278
	Gaols	306,046	306,875	336,324	351,118	369,145
	Other	933,316	950,724	951,133	1,017,804	1,058,135

(a) See 2, Federal Expenditure, next page.

The rise in expenditure during the last few years was due chiefly to increases in wages and salaries and heavier outlay on stores and supplies.

For the purposes of comparison the figures in the table above have been reduced to a population basis, and the results are given in the table following :—

STATE EXPENDITURE ON JUSTICE—PER HEAD, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
		s. d.	s. d.	s. d.	s. d.	s. d.
New South Wales ..	Police	10 6	10 10	11 1	11 0	11 8
	Gaols	1 1	1 2	1 4	1 3	1 4
	Other	3 6	3 9	3 8	3 9	3 10
Victoria	Police	7 7	7 6	7 7	9 4	8 11
	Gaols	1 0	0 11	1 0	1 3	1 2
	Other	3 0	2 11	2 11	3 1	3 2
Queensland	Police	12 8	11 11	11 7	11 5	11 11
	Gaols	1 1	0 11	0 10	0 10	0 11
	Other	4 0	3 9	3 8	3 8	4 1
South Australia ..	Police	8 0	8 5	8 5	8 5	9 2
	Gaols	1 4	1 4	1 4	1 5	1 6
	Other	2 2	2 2	2 0	2 6	2 5
Western Australia ..	Police	11 3	11 0	10 7	10 6	10 7
	Gaols	1 10	1 9	1 7	1 6	1 5
	Other	5 11	5 4	5 4	5 7	5 1
Tasmania	Police	7 6	7 3	7 0	7 2	7 6
	Gaols	0 11	0 11	0 11	0 10	0 10
	Other	3 2	3 1	3 0	3 1	3 6
Northern Territory ..	Police	65 0	81 6	90 2	90 5	99 7
	Gaols	19 4	22 4	24 10	23 4	24 10
	Other	17 0	17 7	15 0	14 8	17 1
Total	Police	9 9	9 9	9 9	10 3	10 6
	Gaols	1 2	1 1	1 2	1 3	1 3
	Other	3 5	3 6	3 5	3 6	3 7

Owing to the smallness of the white population, large area to be policed, and cost of supplies, transport, etc., the figures for the Northern Territory must necessarily appear somewhat abnormal.

The total expenditure in connexion with the administration of justice in the various States has risen from 10s. per inhabitant in 1901 to 15s. 4d. in 1924. Police expenditure increased by 4s. 9d. per head, the average for gaols by 1d. per head, while the expenditure on courts and the remaining machinery of justice increased by 6d. per head during the period. Increased salaries and allowances, and the heavier cost of materials and equipment were largely responsible for the rise in the rate per head during the last few years.

2. **Federal Expenditure.**—(i) *High Court.* With the exception of that for the Northern Territory, the expenditure shown in the foregoing tables is that incurred by the State Governments only, and does not include expenditure in connexion with the Federal High Court, which is given hereunder for the period 1919–20 to 1924–25 :—

EXPENDITURE ON FEDERAL HIGH COURT, 1919-20 TO 1924-25.

Year.	Amount.	Year.	Amount.
	£		£
1919–20	34,370	1922–23..	35,458
1920–21	34,669	1923–24..	35,645
1921–22	33,776	1924–25..	34,769

(ii) *Other Expenditure.* Other items of expenditure during 1924–25 by the Commonwealth Attorney-General's Department include—Secretary's office, £28,230 ; Crown Solicitor, £21,997 ; Court of Conciliation and Arbitration, £12,845 ; Public Service Arbitrator, £4,027 ; Investigation Branch, £9,184. Including the High Court expenditure, but excluding that in connexion with Patents and Copyright, the total expenditure by the federal law authorities in 1924–25 amounted to £123,417.

CHAPTER XI.

PUBLIC BENEVOLENCE.

§ 1. Introductory.

1. **General.**—Charity and charitable effort in Australia may be classified under three headings, viz. :—(*a*) State ; (*b*) public ; (*c*) private. To the first belong all institutions wholly provided for by the State, such as the principal hospitals for the insane in the various States, the Government hospitals in Western Australia, and the Government asylums for the infirm in New South Wales. The second class comprises public institutions of two kinds, viz. :—(i) those partially subsidized by the State or State endowed, but receiving also private aid, and (ii) those wholly dependent upon private aid. To the former division belong such institutions as the principal metropolitan hospitals. In the latter are included institutions established and endowed by individuals for the benefit of the needy generally. All charitable movements of a private character are included in the third group. A more or less accurate statistical account is possible in classes (*a*) and (*b*), but in regard to (*c*) complete tabulation is, for obvious reasons, impossible.

No poor-rate is levied in Australia, and Government aid without return is required only for the aged and disabled. Moreover, although Old-age Pensions, Invalid Pensions, and Maternity Allowances are paid by the Commonwealth, the payments are looked upon rather in the light of a citizen's right than as a charity. Reference to these matters will be found in § 6 and 7 of Chapter VIII. " Finance."

From time to time relief funds have been organized for famine-stricken countries in various parts of the world, or for places where plagues, flood, fire, or earthquake have shown the need of urgent relief. Special funds were also raised for persons disabled or bereaved through war. Complete statistical information in regard to these forms of charity is not, however, available. It may be mentioned that the daily Press frequently accepts the duty of collectorship in charity appeals. In regard to subscriptions to the various patriotic funds which were instituted in consequence of the war, the total for Australia is estimated to exceed £12,500,000 sterling.

§ 2. The Larger Charities of Australia.

1. **Hospitals.**—(i) *General.* All the State capitals have several large and well-equipped hospitals, and there is at least one in every important town. In large centres there are hospitals for infectious diseases, consumptives, women, children, incurables, etc.

(ii) *Principal Hospitals in each State.* The particulars given herein refer to general hospitals at latest available date, and include all institutions affording general hospital relief.

(*a*) *New South Wales.* A Government hospital, with a staff of 32 medical officers and accommodation for about 720 patients, is established at Little Bay, near Sydney. Altogether, there are 4 hospitals for women, 1 for women and children, and 3 for children in the metropolis. The Royal Prince Alfred Hospital, with a medical staff of 90 and with 584 beds, is the largest metropolitan subsidized institution. Amongst other large metropolitan hospitals may be mentioned the Sydney Hospital, with a medical staff of 69 and with 415 beds, St. Vincent's with 58 doctors and 220 beds, and Lewisham with 46 medical attendants and 292 beds. In extra-metropolitan areas the Waterfall Hospital for Consumptives, which is a Government institution, provides accommodation for 419 patients. The Newcastle Hospital has 188 beds and a medical staff of 21. At the Carrington Convalescent Home at Camden there is provision for 110 patients. The hospital in the Broken Hill district can accommodate 186. Upwards of 300,000 out-patients received treatment at the various hospitals.

(*b*) *Victoria.* There are several large metropolitan hospitals in Victoria. In 1924–25 the largest of these, the Melbourne Hospital, had 358 beds, while attendances of out-patients in the twelve months exceeded 200,000 ; the Alfred Hospital had 340 beds, outpatients' attendances numbered 130,000 ; the Austin Hospital for Incurables had 290 beds, St. Vincent's 126, and the Homœopathic 98. Amongst the country institutions, Bendigo had 222 beds, Geelong 217, and Ballarat 170.

(*c*) *Queensland.* Of the metropolitan hospitals, the largest is the Brisbane General, which can accommodate 361 patients. The Children's Hospital has 260 beds, the

Diamantina 167, and the Mater Misericordiæ 127. Ipswich Hospital, with 160 beds, is the largest of the country institutions, followed by Toowoomba with 148, Rockhampton with 116, Townsville with 115, Bundaberg 110, Charters Towers 100, Maryborough 96, Cairns 84, Mackay 84, and Mt. Morgan 71.

(*d*) *South Australia.* Including the Consumptive Home and Infectious Diseases Block, the Adelaide Hospital can accommodate a total of 580 patients. The most important of the country hospitals are at Port Augusta, Port Pirie, and Wallaroo. The Adelaide Children's Hospital has 98 beds.

(*e*) *Western Australia.* Information regarding the capacity of the Western Australian hospitals is not available, but some idea of their comparative importance may be gained from the figures relating to cases treated. In the metropolis, 5,413 cases were treated at the Perth Hospital in 1924, and 1,686 at the Perth Children's Hospital. Of the country hospitals, Kalgoorlie returned 976 cases, Fremantle 1,087, Northam 657, and Wooroloo 393.

(*f*) *Tasmania.* There are well-equipped general hospitals in Hobart and Launceston. The former has a medical staff of 5 and can accommodate 225 patients, with additional verandah accommodation if required, and the latter has 226 beds and a medical staff of 4. Hospitals for women have been established in both centres, and there is a sanatorium for consumptives at Newtown. Outside the metropolitan area, the Devon Cottage Hospital has beds for 112 patients; the Lyell District Hospital can accommodate 45 patients, and there are other institutions in important country centres.

(*g*) *Northern Territory.* In addition to the hospitals at Darwin and Pine Creek, arrangements have been made for the supply of medicines and first aid to outlying stations.

(iii) *Number, Staff, and Accommodation, 1924.* Details regarding the number of hospitals, staffs, and accommodation for the year 1924 are given in the appended table :—

GENERAL HOSPITALS.—NUMBER, STAFFS, AND ACCOMMODATION, 1924.

Particulars.	N.S.W.	Vic.	Q'land.*b*	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Number of Hospitals—								
Government	4	..	4	11	27	3	4	53
Other	154	53	94	32	37	11	1	382
Total ..	158	53	98	43	64	14	5	435
Medical Staff—								
Males	1,157	105	237	149	73	25	2	1,764
Females			8	8	..	..	..	
Total ..	1,157	105	245	157	73	25	2	1,764
Nursing Staff and Attendants—								
Males	103	(*a*) 1	333	104	114	2	2	(*a*) 659
Females	2,854	(*a*) 921	1,569	773	708	219	8	(*a*) 7,052
Total ..	2,957	922	1,902	877	822	221	10	7,711
Accommodation—								
Number of dormitories, wards, etc. ..	1,186	447	633	346	284	144	12	3,052
Capacity, in cubic feet	8,898,888	5,237,582	4,263,002	2,140,070	2,624,457	965,000	135,000	24,264,599
Number of beds, etc. ..	7,880	3,815	3,953	1,635	1,914	744	45	19,986
Cubic feet to each bed	1,145	1,373	1,078	1,310	1,371	1,324	3,000	1,214

(*a*) Victorian figures are exclusive of 804 nursing staff and 18 dispensing staff, sexes not available.
(*b*) Queensland figures for 1923; figures for 1924 not available.

(iv) *Patients Treated.* The table hereunder furnishes particulars respecting patients treated for the year 1924. In addition to the facilities provided in the ordinary wards, a considerable amount of accommodation for certain classes of cases is furnished in out-door or verandah sleeping places, and this can be augmented; full particulars in connexion with these are not available. So far as the returns show, there were 983 out-door beds in New South Wales, 168 in South Australia, 60 in Tasmania, and 30 in the Northern Territory. These figures are not included in the totals given in the table below :—

GENERAL HOSPITALS.—PATIENTS TREATED, 1924.

Particulars.	N.S.W.	Vic.	Q'land.*e*	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Indoor Relief: Persons Treated—								
Males	57,688	19,733	30,850	10,929	10,637	5,936	359	136,132
Females	55,490	14,958	18,965	10,229	7,815	6,021	176	113,654
Total ..	113,178	34,691	49,815	21,158	18,452	11,957	535	249,786
Inmates at beginning of Year—								
Males	2,885	1,215	1,473	594	603	249	18	7,037
Females	2,431	985	813	465	356	236	3	5,289
Total ..	5,316	2,200	2,286	1,059	959	485	21	12,326
Admissions and Re-admissions during Year—								
Males	54,803	18,518	29,377	10,580	10,034	5,687	341	129,340
Females	53,059	13,973	18,152	9,905	7,459	5,785	173	108,506
Total ..	107,862	32,491	47,529	20,485	17,493	11,472	514	237,846
Discharges—Recovered:								
Males	39,724	15,849	26,644	5,545	5,340	5,319	290	98,711
Females	42,153	12,538	16,697	6,321	5,186	5,486	134	88,515
Total ..	81,877	*a* 28,387	*a* 43,341	11,866	10,526	*a* 10,805	424	187,226
Relieved:								
Males	9,855	*b*	*b*	2,897	3,518	*b*	..	*c*
Females	7,175	*b*	*b*	1,920	1,723	*b*	..	*c*
Total ..	17,030	*b*	*b*	4,817	5,241	*b*	..	*c*
Unrelieved:								
Males	1,757	154	670	548	239	58	..	3,426
Females	1,379	132	449	420	139	37	..	2,556
Total ..	3,136	286	1,119	968	378	95	..	5,982
Not stated:								
Males	..	397	..	771*d*	..	13	..	1,181
Females	..	255	..	814*d*	..	10	..	1,079
Total ..	..	652	..	1,585*d*	..	23	..	2,260
Deaths—								
Males	3,612	2,031	1,816	789	822	300	29	9,399
Females	2,311	1,126	867	464	387	224	6	5,385
Total ..	5,923	3,157	2,683	1,253	1,209	524	35	14,784
Inmates at end of year—								
Males	2,740	1,302	1,527	624	718	246	40	7,197
Females	2,472	907	838	431	380	264	36	5,328
Total ..	5,212	2,209	2,365	1,055	1,098	510	76	12,525
Average Daily Number Resident—								
Males	*c*	2,185	2,627	616	704	247	30	*c*
Females				543	413	250	12	
Total ..	*c*	2,185	2,627	1,159	1,117	497	42	*c*

(*a*) Including relieved. (*b*) Included in recovered. (*c*) Not available.
(*d*) Included nurslings without disease. (*e*) Queensland figures for 1923; figures for 1924 not available.

(v) *Summary for Five Years, 1920 to 1924.* Returns for the last five years of the number of hospitals in Australia, admissions, patients treated, deaths, and expenditure, are given in the following table. Figures for general hospitals only are tabulated, since the working of "special" institutions is not properly comparable with those which treat every class of case.

GENERAL HOSPITALS.—SUMMARY, AUSTRALIA, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
Number of institutions	393	404	424	426	435
Number of beds	17,890	18,342	18,969	19,590	19,986
Admissions during year ..	202,053	205,072	209,018	227,168	237,846
Indoor patients treated ..	211,332	215,278	218,209	237,339	249,786
Deaths	14,475	13,969	13,485	14,637	14,784
Expenditure .. £	2,099,601	2,332,116	2,441,075	2,632,360	2,800,518

In addition to those admitted to the institutions, there are large numbers of out-patients. The exact number of these cannot be given, but a rough estimate of distinct cases places the total at about 500,000.

(vi) *Revenue and Expenditure.* The revenue and expenditure for the year 1924 were as follow :—

GENERAL HOSPITALS.—REVENUE AND EXPENDITURE, 1924.

Particulars.	N.S.W.	Victoria.	Q'land.*a*	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
	£	£	£	£	£	£	£	£
Revenue—								
Fees of patients, etc.	167,112	69,095	63,241	72,261	66,898	27,987	572	467,166
Government grants	611,707	83,912	241,051	174,929	93,577	42,467	4,738	1,252,381
Other	496,696	303,407	191,824	38,103	43,532	9,122	20	1,082,704
Total ..	1,275,515	456,414	496,116	285,293	204,007	79,576	5,330	2,802,251
Expenditure—								
Salaries and Maintenance ..	929,136	337,571	457,700	210,252	193,205	56,229	4,807	2,188,900
Buildings ..	241,029	85,673	45,576	65,004	4,149	5,468	340	447,239
Other	90,350	10,978	23,089	11,120	5,336	23,323	183	164,379
Total ..	1,260,515	434,222	526,365	286,376	202,690	85,020	5,330	2,800,518

(*a*) Queensland figures for 1923; figures for 1924 not available.

2. **Benevolent and Destitute Asylums.**—(i) *General.* There has been a great increase in recent years in the amount of aid provided for the aged. Two elements, each of them independent of the growth of population, have influenced this increase. One is, that the general age of the community has advanced—the large flow of immigration of sixty and seventy years ago having been mostly of persons in the prime of life; the other is the increased regard paid in all British communities to the well-being of the helpless. In Australia numerous establishments have been founded for the housing and protection of persons no longer able to care for themselves. The institutions are supported by Government and municipal aid, public subscriptions, charity performances, bequests, etc.; and in many cases relatives of indigent and afflicted persons contribute to their maintenance.

The impossibility of an entirely satisfactory statistical tabulation in regard to all forms of charitable aid is especially marked in the case of benevolent institutions, since the conditions under which they have been established in the different centres in Australia have resulted in differences in the classes of cases treated by them. For example, in Western Australia, the Home for Destitute Women includes a maternity ward, for which the statistics are not separately kept. Since the chief function of the institution is aid to the destitute, it has been included amongst benevolent asylums. In Victoria, although nine of the hospitals are also benevolent asylums, they have been classed under hospitals. In South Australia, the Destitute Asylum includes lying-in and children's departments.

(ii) *Principal Institutions.* The principal institutions of this nature in each State are as follows :—

(*a*) *Government Asylums for the Infirm, New South Wales.* There are five asylums for the infirm maintained by the Government—four for men and one chiefly for women. Rookwood, the largest of these, had in 1924 an average number resident of 1,485, Newington 707, and Liverpool 631, and the Parramatta Homes 459. The State Labour Depot and Refuge at Randwick had 61 inmates during 1923.

(*b*) *Benevolent Asylums, Victoria.* Exclusive of the asylums attached to hospitals, there are eight institutions in Victoria. In 1924–25 the average daily number of indoor patients was 1,947, and there were 290 distinct cases of outdoor relief.

(*c*) *Benevolent Asylums, Queensland.* There are four institutions in Queensland, with 1,259 beds. The most important of these is at Dunwich (Stradbroke Island) with 1,141 beds, while there are small institutions at Nundah, Rockhampton, and Toowoomba. At the end of 1923 the inmates of the four institutions numbered 1,168.

(*d*) *Homes for Aged, South Australia.* At the Old Folks' Home, Magill, there were 407 inmates at the end of 1924, and 71 in the Aged Men's Home, Beaumont.

(*e*) *Homes for the Destitute, Western Australia.* There are two homes in Western Australia supported by public funds. The Old Men's Home at Claremont had 595 inmates at the end of 1924, and the Women's Home, Fremantle, which receives children also, had 92 adult inmates.

(*f*) *Charitable Establishments, Tasmania.* There are two principal Government charitable establishments in Tasmania. The New Town Infirmary and Consumptive Home, with 230 beds, had 226 inmates on 30th June, 1925, and the Home for Invalids, Launceston, with 31 beds, had 31 inmates on the same date.

(iii) *Revenue and Expenditure.* Details regarding revenue and expenditure for the year 1924 are given in the following table :—

BENEVOLENT ASYLUMS.—REVENUE AND EXPENDITURE, 1924.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
Revenue—							
Government aid ..	148,633	25,275	43,229	44,623	13,515	9,961	285,236
Municipal aid ...	..	883	..	..	..	..	883
Public subs., legacies, etc.	3,617	30,626	2,800	2	..	..	37,045
Fees	18,704	23,680	..	3,308	11,433	4,768	61,893
Other	5,813	9,576	526	244	..	1,537	17,696
Total ..	176,767	90,040	46,555	48,177	24,948	16,266	402,753
Expenditure—							
Buildings	2,871	4,102	605	1,228	..	179	8,985
Maintenance	166,835	59,396	44,929	47,889	24,948	10,944	354,941
Other	5,773	6,351	1,055	..	..	5,143	18,322
Total ..	175,479	69,849	46,589	49,117	24,948	16,266	382,248

3. **Orphanages, Industrial Schools, etc.**—(i) *General.* The organization of charitable effort varies greatly in regard to orphans and waifs. In many institutions, shelter and some form of industrial training are offered to destitute children of all classes whether orphans or not, while some of those styled orphanages do not confine their relief strictly to orphans. The expenditure on orphanages in 1924 was approximately £240,000.

(ii) *Principal Institutions.* The principal institutions in each State are as follows :—

(*a*) *New South Wales.* The care of destitute and neglected children is entrusted to the State Children's Relief Board, whose officers supervise the welfare of the children and the treatment of them by those to whom they are boarded out. Provision is made for instruction in various trades and callings.

There are also orphanages, farm homes, country homes for children, etc., with upwards of 2,000 children under care.

There are several reformatories and industrial schools maintained by the State. At the Parramatta Industrial School for Girls, to which a Training Home is attached, there were on 31st December, 1924, 152 inmates. At the Farm Home for Boys, Gosford, there were 248 inmates at the end of 1924.

(*b*) *Victoria.* There are ten orphanages in Victoria, with 1,690 beds. The daily average of the inmates was 1,645 in 1923–24. The expenditure in the same year was £48,596.

At the end of 1924 there were two industrial and four reformatory schools in the State. Of these, one in each class is wholly controlled by the Government, being used merely as a receiving and distributing dèpôt. The children are sent thence to situations, foster homes, or other institutions dealing with State wards. The other schools are under private management, receiving an allowance for State wards. Many of the reformatory children are placed with friends, or licensed out.

(*c*) *Queensland.* There are twelve orphanages in Queensland. The number under care on 31st December, 1923, was 1,000, and the expenditure for the year, £27,732.

There are also eight industrial and reformatory schools which had 178 boys and 59 girls under detention at the end of 1923.

(*d*) *South Australia.* The State Children's Department exercises a supervision over the probationary and industrial schools and the reformatories. The total number of admissions into these institutions in 1924–25 was 329. The number of inmates on the 30th June, 1925, was 263 ; in addition to which 1,510 were placed out, or had been adopted or apprenticed ; and 1,773 children were placed with licensed foster-mothers and others under the supervision of the Department. There were five deaths of children under State control.

There are three orphan asylums. The number under care during 1924 was 351, and the number of inmates on 31st December, 1924, was 288. There were no deaths during the year, and the expenditure amounted to £4,981.

(*e*) *Western Australia.* In Western Australia there were, at 30th June, 1925, thirteen institutions classed as orphanages, industrial schools, etc., containing 415 boys and 294 girls. There were also 19 boys and 18 girls at the Government Receiving Dépôt at the 30th June, 1925.

(*f*) *Tasmania.* There are four industrial schools and one orphanage under benevolent institutions in the State. Admissions in 1924–25 numbered 45, and average daily number of inmates was 175. No deaths occurred during the year. The expenditure was £10,655.

(iii) *Transactions of State Departments.* The following table summarizes the transacions in 1924 of State Departments for the relief of neglected children :—

STATE RELIEF OF NEGLECTED CHILDREN.—SUMMARY, 1924.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Number of children in institutions, boarded out, or on probation—							
Males	2,861	3,554	4,119	764	437	247	11,982
Females	2,491	2,934	3,668	646	351	232	10,322
Total ..	5,352	*a*6,488	7,787	1,410	788	479	22,304
Number of children boarded out with their own mothers and female relatives—							
Males ..	13,598	7,660	2,633	207	55	..	26,870
Females ..			2,497	156	64	..	
Total ..	13,598	7,660	5,130	363	119	..	26,870
Total	18,950	*a* 14,148	12,917	*b* 1,773	907	479	*d* 49,174
	£	£	£	£	£	£	£
Gross cost to State of children's relief ..	525,010	328,737	195,687	49,299	*c*28,703	13,965	1,141,401
Receipts, from parents' contributions, etc. ..	15,719	17,840	12,790	5,828	5,390	1,440	59,007
Net cost ..	509,291	310,897	182,897	43,471	*c*23,313	12,525	1,082,394

(*a*) Excluding 26 incapacitated children maintained by the State. (*b*) Excluding 1,773 children (924 males and 849 females) placed with licensed foster-mothers and others. (*c*) Maintenance, State children only. (*d*) See notes (*a*) and (*b*).

4. **Lepers.**—Lazarets for the treatment of lepers have been established in New South Wales (Little Bay); Queensland (Peel Island, near Brisbane, and Dayman Island, Torres Strait); and the Northern Territory (Mud Island). Quarantine and isolation stations have also been used for the segregation of patients. Up to 1915, 545 cases of leprosy had been recorded in Australia. Later information is not available, but between the calendar years 1916 to 1923 there were 48 deaths from the disease. At the end of 1924 there were 15 lepers in the Little Bay lazaret.

5. **Hospitals for the Insane.**—(i) *General.* The method of compiling insanity statistics has been fairly uniform throughout the States, but differences in diagnosis of the early stages of the disease introduce an element of uncertainty which considerably affects the value of comparisons.

(ii) *Hospitals, Staff, etc., 1924.* Particulars regarding the number of institutions, medical and nursing staff, and accommodation are given in the appended table for the year 1924 :—

HOSPITALS FOR THE INSANE.—NUMBER, STAFFS, ACCOMMODATION, 1924.

Particulars.	N.S.W.	Vic.(*a*)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Number of institutions—							
Government	10	9	3	2	3	1	28
Private	2	(*b*) 5	..	..	..	..	7
Total	12	14	3	2	3	1	35
Medical Staff —							
Males	24	22	6	5	3	2	64
Females	1		1	..	..	..	
Total	25	22	7	5	3	2	64
Nursing Staff and Attendants—							
Males	683	649	242	97	133	54	1,858
Females	624	612	182	95	74	62	1,649
Total	1,307 (*g*)	1,261	424	192	207	116	3,507
Accommodation—							
Number of dormitories ..	(*f*)	1,282	566	507	44	407	(*f*)
Capacity, in cubic feet ..	(*f*)	3,757,735	2,046,916	894,163	714,714	878,590	(*f*)
Number of beds	(*c*)6,840	5,540	2,802	1,317	1,186	702	(*c*) 18,387
Cubic feet to each bed ..	(*d*)(*c*) 600 (*e*)(*c*) 1,000	678	731	678	605	1,251	(*f*)

(*a*) Exclusive of Receiving House, Royal Park, and of the Receiving Wards at Bendigo and Geelong Hospitals. (*b*) There are five private licensed houses in Victoria, in which there were 95 cases at the end of 1924. Complete figures for these private asylums are not available. (*c*) Government hospitals only. (*d*) Ordinary dormitory. (*e*) Hospital dormitory. (*f*) Information not available. (*g*) Also 30 on clerical staff (males).

(iii) *Patients, 1924.* Information regarding patients treated, deaths, etc., for the year 1924 is given in the table hereunder :—

HOSPITALS FOR THE INSANE.—PATIENTS, DEATHS, ETC., 1924.

Particulars.	N.S.W.	Vic.(*a*)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Admissions and re-admissions during year—							
Males	775	402	302	203	72	47	1,801
Females	653	407	208	177	34	45	1,524
Total	1,428	809	510	380	106	92	3,325
Discharges—Recovered—							
Males	290	84	132	85	24	12	627
Females	283	95	98	65	12	12	565
Total	573	179	230	150	36	24	1,192
Relieved and unrelieved—							
Males	88	58	11	39	22	10	228
Females	87	56	12	50	4	9	218
Total	175	114	23	89	26	19	446

(*a*) Exclusive of inmates of the Receiving House, Royal Park, and of Receiving Wards attached to the hospitals at Bendigo and Geelong, and of five private licensed houses.

HOSPITALS FOR THE INSANE.—PATIENTS, DEATHS, ETC., 1924—*continued.*

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Absconders not retaken—							
Males	10	18	..	..	..	..	28
Females	1	1	..	2	..	..	4
Total	11	19	..	2	..	..	32
Deaths—							
Males	331	254	136	76	42	27	866
Females	219	176	56	63	21	12	547
Total	550	430	192	139	63	39	1,413
Number of patients on books at end of year—							
Males	4,535	2,923	1,863	687	718	303	11,029
Females	3,696	3,173	1,120	561	329	315	9,194
Total	8,231	6,096	2,983	1,248	1,047	618	20,223
Average daily number resident—							
Males	4,284	2,605	1,822	666	698	302	10,377
Females	3,367	2,792	1,077	543	335	307	8,421
Total	7,651	5,397	2,899	1,209	1,033	609	18,798
Number of patients on books at end of year per 1,000 of population—							
Males	3.94	3.55	4.23	2.49	3.69	2.80	3.68
Females	3.34	3.81	2.83	2.11	1.95	2.89	3.20
Persons	3.65	3.68	3.57	2.30	2.87	2.84	3.44
Average number of patients resident in hospitals for insane per 1,000 of mean population—							
Males	3.77	3.20	4.18	2.46	3.62	2.82	3.50
Females	3.08	3.38	2.76	2.07	2.01	2.87	2.96
Persons	3.43	3.29	3.51	2.27	2.87	2.85	3.24

(a) Exclusive of inmates of the Receiving House, Royal Park, and of Receiving Wards attached to the hospitals at Bendigo and Geelong, and of five private licensed houses.

In some States persons well advanced towards recovery are allowed to leave the institutions and reside with their relatives or friends, but they are under supervision and their names are kept on the books. The figures for admissions, etc., include absconders captured and re-admitted. Generally, very few escapees succeed in avoiding capture.

(iv) *Summary for Australia, 1920 to 1924.* The table hereunder gives a summary for hospitals for the insane in Australia for each of the five years 1920 to 1924. Licensed houses (except as regards expenditure) are included in the totals for New South Wales and Victoria, in the latter the figures are exclusive of reception houses, and observation wards in gaols :—

HOSPITALS FOR THE INSANE.—SUMMARY, AUSTRALIA, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
Number of institutions (a) ..	35	35	36	35	35
Number of beds	17,468	17,224	18,047	18,303	18,387
Admissions	3,501	3,254	3,226	3,342	3,325
Discharged as recovered, relieved, etc.	2,302	1,723	1,648	1,691	1,638
Deaths	1,483	1,473	1,267	1,433	1,413
Expenditure	1,414,055	1,398,148	1,303,907	1,401,459	1,494,025

(a) Exclusive of receiving wards at general hospitals, and including licensed houses for insane in Victoria.

(v) *Number of Insane, 1920 to 1924.* The proportion of insane, as well as the total number returned as under treatment, has changed very little during recent years. The next table gives the number of insane under official care in Australia and the proportion per 1,000 of population for the last five years.

INSANE PERSONS IN INSTITUTIONS, 1920 TO 1924.

State.	1920.	1921.	1922.	1923.	1924.
			NUMBER.		
New South Wales	7,889	7,970	7,991	8,112	8,231
Victoria	5,830	5,842	5,997	6,026	6,096
Queensland	2,745	2,753	2,842	2,869	2,983
South Australia	1,194	1,190	1,224	1,248	1,248
Western Australia	1,166	1,104	1,079	1,066	1,047
Tasmania	578	584	599	608	618
Total	19,402	19,443	19,732	19,929	20,223
			PER 1,000 OF POPULATION.		
New South Wales	3.77	3.75	3.93	3.67	3.65
Victoria	3.82	3.77	3.77	3.71	3.68
Queensland	3.65	3.58	3.61	3.54	3.57
South Australia	2.43	2.37	2.39	2.38	2.30
Western Australia	3.52	3.48	3.15	3.00	2.87
Tasmania	2.72	2.67	2.74	2.78	2.84
Australia	3.58	3.53	3.61	3.47	3.44

For the period embraced in the tables Victoria shows the highest rate of insanity, roughly 1 in 270 persons. It is stated that this is chiefly owing to the proportionately greater number of the aged in that State. On the other hand, in South Australia a considerably lower insanity rate has prevailed, averaging about 1 in 420, Tasmania being next with an average of about 1 in 360.

A more rational attitude towards the treatment of mental cases has resulted in a greater willingness in recent years to submit afflicted persons to treatment at an earlier stage. Hence an increase in the number of recorded cases does not necessarily imply an actual increase in insanity, and the small increment in the numbers in the first of the immediately preceding tables is probably, if not solely, due to this circumstance.

(vi) *Causes of Insanity.* The proportion of causes of insanity to the total ascertained causes in Australia in the five years 1920 to 1924 shows that hereditary influence has been the chief factor, more than one-fifth of the total ascertained causes coming under this head. Domestic troubles, adverse circumstances, etc., have also been a fruitful source. Cases due to intemperance in drink range from one in 9 to one in 13.

INSANITY.—PERCENTAGE OF CAUSES, AUSTRALIA, 1920 TO 1924.

Causes, Previous History, etc.	1920.	1921.	1922.	1923.	1924.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Domestic trouble, adverse circumstances, mental anxiety ..	9.3	10.6	12.6	11.4	13.1
Intemperance in drink ..	10.9	7.7	8.9	9.4	8.0
Hereditary influence, ascertained; congenital defect, ascertained	23.7	21.2	21.8	22.9	24.6
Pregnancy, lactation, parturition and puerperal state, uterine and ovarian disorders, puberty, change of life	6.0	7.5	7.6	7.0	8.4
Previous attacks	12.5	11.5	12.4	13.6	12.9
Accident, including sunstroke ..	1.7	0.8	1.3	1.5	1.3
Old age	10.6	9.2	11.7	11.1	10.8
Venereal disease	7.1	5.6	3.3	5.2	5.5
Other causes ascertained ..	18.2	25.9	20.4	17.9	15.4
All ascertained causes ..	100.0	100.0	100.0	100.0	100.0

(vii) *Length of Residence in Hospital.* (*a*) *New South Wales.* Particulars are not available regarding the average length of residence in hospitals during the year of persons who died or were discharged. There are three State Reception Houses, where suspected persons are confined for observation, being subsequently either discharged or transferred to lunatic asylums. In one of the gaols, observation wards have been instituted with similar functions.

(*b*) *Victoria.* Particulars are not available as to the average length of residence in hospitals during the year of persons who died or were discharged. There are lunacy wards in two of the general hospitals; also a State receiving house where persons are placed for observation, and subsequently discharged or transferred to asylums.

(*c*) *Queensland.* The average residence in the institutions of those who died during the year was 7 years 179 days for males and 10 years 127 days for females; and of those who were discharged, 315 days for males and 1 year 52 days for females. There are three reception houses for observation of the insane.

(*d*) *South Australia.* The average residence of those who died was 9 years 14 days for males and 6 years 147 days for females; of those discharged, 222 days for males and 336 days for females.

(*e*) *Western Australia.* The period of residence of those who died during the year averaged about 8 years 104 days for males and 9 years 120 days for females; of those who were discharged, 3 years 30 days for males and 1 year 74 days for females.

(*f*) *Tasmania.* The period of residence of those who died was 10 years 332 days for males and 11 years 49 days for females; that of those discharged, 1 year 154 days for males and 1 year 4 days for females.

(viii) *Revenue and Expenditure, 1924.* The revenue of Goverment asylums is small in comparison with their cost, and consists chiefly of patients' fees. The proportion of expenditure borne by the State amounts to about 90 per cent.

HOSPITALS (GOVERNMENT) FOR THE INSANE.—FINANCES, 1924.

Particulars.	N.S.W. (*a*)	Victoria. (*a*)	Q'land. (*a*)	S. Aust.	W. Aust.	Tasmania. (*a*)	Total.
	£	£	£	£	£	£	£
Revenue (Exclusive of Government Grants)—							
Fees of Patients	76,668	59,314	22,689	15,486	10,734	7,970	192,861
Other	2,662	5,467	1,167	1,176	2,463	420	13,355
Total	79,330	64,781	23,856	16,662	13,197	8,390	206,216
Expenditure—							
Salaries	314,075	253,762	124,089	38,068	53,204	28,374	811,572
Maintenance	216,432	172,662	67,319	46,673	39,312	22,505	564,903
Buildings	..	36,289	17,031	15,173	..	764	69,257
Other	40,167	6,872	1,161	..	..	93	48,293
Total	570,674	469,585	209,600	99,914	92,516	51,736	1,494,025

(*a*) Year ended 30th June, 1925.

6. **Care of the Feebleminded.***—(i) *General.* The Mental Deficiency Act of 1920, which came into operation in Tasmania in March, 1922, was the first legislation in Australia dealing with the feebleminded. This Act was based on the British Act of 1913. In 1913 South Australia passed a Mental Deficiency Act relating to the insane, idiots and imbeciles, which is really a lunacy act, as it deals in part with low-grade defectives, and makes no distinction between mental disorder and mental deficiency. In 1925, Bills for Acts relating to the care of mental defectives were being prepared in New South Wales and Victoria.

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* Information supplied by the Department of Public Health, Tasmania.

(ii) *Administration of the Tasmanian Act.* In Tasmania the Act is administered by a Mental Deficiency Board, which consists of the Director of Public Health as Chairman, the Director of the State Psychological Clinic, a medical practitioner with a knowledge of psychiatry, a representative of the Education Department, and a representative of the University of Tasmania. The examining work is under the direction of the State Psychological Clinic. The Act is the first British Statute to make legal recognition of the clinical psychologist. Provision is made for the ascertainment and registration of all defectives in the State, and for their education. The methods of treatment, care and protection, comprise (*a*) supervision in the community, (*b*) guardianship, and (*c*) institutional care. The New Town Infirmary has been declared to be a Government Institution for Defectives, and the Reformatory Section of the Hobart Gaol has been declared to be a Government Institution for the care of criminal defectives. The examination by the Clinic includes ascertainment of and investigation into such particulars concerning the bodily (physical and medical), mental, and social conditions, the pedagogical, personal, and family history of persons alleged to be defectives, as well as any conditions and circumstances which may be necessary for diagnosis. During the years 1922–23 to 1925–26, 1,010 children and adults were examined by the Psychological Clinic, while 331 persons have been ascertained to be defectives, certified and registered. The later have been classified as follows :—Idiots, 8 ; Imbeciles, 49 ; Feebleminded, 274.

In addition, there are idiots and imbeciles in the New Norfolk Mental Diseases Hospital dealt with under the Lunacy Act, and there are unascertained imbeciles and feebleminded adults in the New Town Infirmary (Benevolent Home). So far, 190 defectives have come under the direct control of the Mental Deficiency Board, and have been dealt with as follows :—Institution, 31 ; Guardianship, 29 ; Supervision, 118 ; Parole, 12.

The Education Department controls feebleminded children in the State Schools and provides special classes for them. On attaining the age of 14 or 16 years, according as they are or are not in special classes, these defectives are notified by the Department to the Mental Deficiency Board, which then assumes the control of them. A state school population of about 23,000 children has been surveyed by the Clinic, and the percentage of feebleminded (moron) children of school age has been ascertained to be about 0.5. The percentage of all grades of defectives in the whole population is not likely to exceed 0.3 per cent.

7. **Protection of Aborigines.**—For the protection of the aboriginal Australian race there are institutions, under the supervision of Aborigines Boards, where the blacks are housed and encouraged to work, the children receiving elementary education. The work is usually carried on at mission stations, but many of the natives are nomadic, and receive food and clothing when they call, whilst others but rarely come under the notice of the Boards. The native race is extinct in Tasmania. The approximate annual expenditure on maintenance, etc., is—New South Wales, £38,000 ; Victoria, £6,000 ; Queensland, £40,000 ; South Australia, £25,000 ; Western Australia, £31,000 ; Northern Territory, £10,000 ; total for Australia, £150,000. In 1924 in New South Wales the number of full-bloods receiving aid was 1,855, in addition to which there were half-castes, quadroons, and octoroons ; in Victoria there were 317 under the care of the Aborigines Protection Board ; in Queensland, at the end of 1923, there were 3,755 aborigines at the mission stations ; in South Australia, in 1924, there were about 650 inmates at mission stations, while in Western Australia the adult aborigines and half-castes in the native institutions in the year 1924 numbered 540. At the mission stations in the Northern Territory about 1,500 were in residence, but casual assistance and medical attendance are given to large numbers of natives every year.

8. **Royal Life Saving Society.**—In each of the State capitals, " centres " of the Royal Life Saving Society have been established. Life preservation is the object of the Society, and its immediate aims are (*a*) educative and (*b*) remedial. The encouragement of swimming and life-saving in schools, colleges, clubs, etc., will bring about a more widespread knowledge of these necessary matters, and there is increasing provision of life-belts, reels, lines, and other first-aid appliances on ocean beaches, wharves, and other suitable places. Upwards of 3,000 certificates of proficiency in various grades are issued annually after examination.

9. Royal Humane Society.—The Royal Humane Society of Australasia has for its objects (*a*) to grant awards for skill, promptness, and perseverance in life saving; (*b*) to provide assistance in cases of danger and apparent death; (*c*) to restore the apparently drowned; (*d*) to collect and circulate the latest information regarding approved methods and apparatus for life saving. Awards of medals and certificates are made numbering about 100 annually. Upwards of 350 lifebuoys have been provided at various places on the coasts, rivers, lakes, and reservoirs in the various States. Swimming is encouraged amongst school children, and awards are made for proficiency.

10. Other Charitable Institutions.—Owing to variety of name and function of other charitable institutions it has been found impracticable to give detailed results. The aid given in kind—food, clothing, tools of trade, etc.—is considerable, whilst the shelter and treatment afforded range from a bed for a night for casual callers in establishments ministering minor charity, to indoor treatment over long periods in those that exist for the relief of the aged and infirm. The institutions not so particularized include asylums for the deaf, dumb, and blind, maternity institutions and infant homes, homes for the destitute and aged poor, industrial colonies, night shelters, crèches, homes of hope, rescue homes, free kindergarten and ragged schools, auxiliary medical charities, free dispensaries, benevolent societies and nursing systems, ambulance and health societies, boys' brigades, humane and animals' protection societies, prisoners' aid associations, shipwreck relief societies, bush fires and mining accident relief funds, etc.

11. Total Expenditure on Charities.—The table below gives the total expenditure on charities in each of the last five years, the figures for the various States being compiled, as far as possible, on the same basis. For the reason given in § 1. 1. the cost of old-age and invalid pensions and of maternity allowances is not included:—

TOTAL EXPENDITURE ON CHARITIES, 1920 TO 1924.

State or Territory.	1920.	1921.	1922.	1923.	1924.
	£	£	£	£	£
New South Wales ..	2,391,057	2,540,606	2,532,039	2,754,759	2,941,515
Victoria	1,230,566	1,459,163	1,521,278	1,488,058	1,653,974
Queensland	933,547	1,017,817	975,028	991,753	991,753*a*
South Australia	416,303	520,879	551,596	546,528	621,315
Western Australia ..	451,738	475,802	457,661	468,179	508,809
Tasmania	199,206	206,513	216,580	215,494	228,246
Northern Territory ..	6,178	6,265	5,585	6,625	5,330
Total	5,628,595	6,227,045	6,259,767	6,471,396	6,950,942

(*a*) Year 1923; figures for 1924 not available.

The figures include expenditure from Government and private sources of all institutions and societies affording relief, for which particulars are available.

CHAPTER XII.

PUBLIC HYGIENE.

§ 1. Public Health Legislation and Administration.

1. **General.**—(i) *Commonwealth.* The Commonwealth Department of Health, which was created on the 3rd March, 1921, and commenced its administration as from the 7th March, 1921, is controlled by the Commonwealth Minister for Health. The Department was formed by the extension and development of the Commonwealth Quarantine Service, the Director of Quarantine becoming the Commonwealth Director-General of Health and Permanent Head of the Department.

The functions of the Department are as follows :—

> The administration of the Quarantine Act : The investigation of causes of disease and death and the establishment and control of laboratories for this purpose : The control of the Commonwealth Serum Laboratories and the commercial distribution of the products manufactured in those laboratories : The methods of prevention of disease : The collection of sanitary data, and the investigation of all factors affecting health in industries : The education of the public in matters of public health : The administration of any subsidy made by the Commonwealth with the object of assisting any effort made by any State Government or public authority directed towards the eradication, prevention, or control of any disease : The conducting of campaigns of prevention of disease in which more than one State is interested : The administrative control of the Australian Institute of Tropical Medicine : The administrative control of infectious disease amongst discharged members of the Australian Imperial Forces : The study of the behaviour of communicable diseases throughout the world and acting as an intelligence bureau for the collection and dissemination of information : The control of venereal disease and infectious diseases in the Mercantile Marine : The inspection of vessels, and the medical inspection of seamen under the Navigation Act : The control of the importation of food and drugs under the Commerce Act : Generally to inspire and co-ordinate public health measures : Any other functions which may be assigned to it.

As noted above, the Department controls the Australian Institute of Tropical Medicine at Townsville, and it directs the campaign in connexion with hookworm disease. These matters, together with the control exercised by the Department over malaria and bilharziasis introduced by returned soldiers and sailors, are dealt with separately in subsequent pages in this chapter (see § 5). Reference to the Commonwealth Serum Laboratories will be found in § 4, 5.

(ii) *New South Wales.* The Department of Public Health is controlled by the Minister of Public Health. The Director-General of Public Health is the chief executive officer, and is assisted by various staffs—medical, bacteriological, chemical, veterinary, dairy inspection, meat inspection, sanitary, pure food, and clerical. The work of the Department extends over the whole of the State, and embraces all matters relating to public health and the general medical work of the Government, the Director-General of Public Health holding the position of Chief Medical Officer of the Government as well as being permanent head of the Department.

The Board of Health has certain statutory duties imposed upon it by various Acts of Parliament, and the Director-General is President of the Board. These duties consist largely in supervision of the work of local authorities (Municipal and Shire Councils), so far as that work touches upon public health matters connected with the following Acts :— Public Health Act 1902, Public Health (Amendment) Acts 1915 and 1921, Dairies Supervision Act 1901, Noxious Trades Act 1902, Cattle Slaughtering and Diseased Animals and Meat Act 1902, Pure Food Act 1908, Private Hospitals Act 1908, and Venereal Diseases Act 1918. The Board further possesses certain powers connected with public health matters under the Local Government Act 1919. The Board of Health is a nominee Board, created in 1881 and incorporated in 1894.

The Director-General of Public Health acts independently of the Board of Health as regards the State hospitals and asylums and the various public hospitals throughout the State which receive subsidies from the Government.

(iii) *Victoria.* In this State the Public Health Acts 1915, 1919, and 1922 are administered by a Commission composed of the Chief Health Officer and six members appointed by the Governor-in-Council. The medical and sanitary staffs of the Commission consist of (*a*) the chief health officer, who is also chairman, (*b*) six district health officers and three assistant health officers, (*c*) chief sanitary engineer and assistant sanitary engineer, three building surveyors and four building inspectors, and (*d*) twelve health inspectors. The main function of the Commission is to enforce the execution of the Health Acts by the local municipalities, but it has been found advisable to supplement this supervisory function by an active policy of inspection of the sanitary condition of various districts, and the sampling of articles of food. The supervision of the sanitary conditions of milk production is under the Dairy Supervision Branch of the Department of Agriculture, but distribution is supervised by the Commission. Acts administered by the Department of Public Health are :—The Health Acts (in which are now included the Adulteration of Wine Act, the Pure Food Act, the Meat Supervision Act) and the Cemeteries Act, which includes the Cremation Act. The Department administers also the Midwives Act, the Goods Act, the Venereal Diseases Act, the Infectious Diseases Hospital Act, the Heatherton Sanatorium Act, the Masseurs Act, the Nurses Registration Act, and the Sewerage Districts Acts.

(iv) *Queensland.* The Public Health Acts 1900 to 1922 are administered by the Commissioner of Public Health under the Home Secretary. The executive staff of the Department includes a health officer, a medical officer for the tuberculosis bureau, two medical officers for venereal diseases, fourteen food and sanitary inspectors, and one staff nurse. There are, in addition, rat squads in Brisbane. Northern offices, in charge of inspectors, are located at Rockhampton, Townsville, and Cairns, whilst another inspector is stationed at Toowoomba. A laboratory of microbiology, in charge of a bacteriologist, is controlled by the Department, and performs a wide range of microbiological work for the assistance of medical practitioners and the Department.

One function of the Department is to stimulate and advise local sanitary authorities on matters pertaining to the Health Acts, and, where necessary, to rectify or compel rectification, at the cost of the local authority, of sanitary evils produced by local inefficiency or apathy. Its powers and responsibilities were widely increased by the Amending Acts of 1911, 1914, 1917, and 1922.

(v) *South Australia.* The Central Board of Health consists of five members, three of whom (including the chairman, who is permanent head of the Department) are appointed by the Governor, while one each is elected by the city and suburban local Boards and the country local Boards. The Health Act 1898 to 1925 provides that the municipal and district councils are to act as local Boards of Health for their respective districts. There are 197 of these local Boards under the general control and supervision of the Central Board. A chief inspector and one inspector under the Health and Food and Drugs Acts periodically visit the local districts, and see generally that the Boards are carrying out their duties. There is also a chief inspector of food and drugs (under the Food and Drugs Act 1908 to 1924), who, in company with an analyst visits country districts, and takes samples of milk, which are analysed on the spot. There are three nurse inspectors employed in advising and assisting local Boards in connexion with outbreaks of infectious diseases and in carrying out generally similar duties to those of male inspectors, with the exception of certain work under the Food and Drugs Act. In the outlying districts there are sixteen inspectors directly responsible to the Board. The Venereal Diseases Act 1920, which provides for the prevention and control of venereal diseases, has not yet been proclaimed.

(vi) *Western Australia.* The legislation in this State comprises the Health Act 1911, with the amending Acts of 1912 (2), 1915, 1918, and 1919, which have been partly consolidated and reprinted as "The Health Act 1911–19." Further amending Acts were passed in 1920 and 1921. The central authority is the Department of Public Health, controlled by a Commissioner, who must be a qualified medical practitioner. The local authorities comprise :—(*a*) Municipal Councils, (*b*) Road Boards where the boundaries of a Health District are conterminous with those of a Road District, and (*c*) Local Boards of Health, composed of persons appointed by the Governor. These local Boards are utilized only where neither Municipal Councils nor Road Boards are available. Generally speaking, the Act is administered by the local authorities, but the Commissioner has supervisory powers, also power to compel local authorities to carry out the provisions of the Act. In cases of emergency, the Commissioner may exercise all the powers of a local health authority in any part of the State.

All the usual provisions for public health legislation are contained in the Act, and, in addition, provision is made for the registration of midwifery nurses, the medical examination of school children, the control of public buildings (*i.e.*, theatres, halls, etc.), the control of food, and the provision of standards therefor. The amending Acts of 1915 and 1918 deal exclusively with venereal diseases.

(vii) *Tasmania.* The office of Director of Public Health was established under the Director of Public Health Act 1920, and the person holding the office of Chief Health Officer under the Public Health Act 1903 at the time of the passing of the first-named Act is the Director of Public Health, and is also the permanent head of the Department. The Director has very wide powers, and in the event of the appearance of dangerous infectious disease (small-pox, plague, etc.) in the State, is vested with supreme power, the entire responsibility of dealing with such an outbreak being taken over by him from the local authorities. Local executive is vested in local authorities, who possess all legal requirements for the efficient sanitary regulation of their districts. Controlling and supervisory powers over these bodies are possessed by the Department of Public Health, and many of the powers conferred upon them may be converted into positive duties. One function of the Department is to advise local authorities on matters pertaining to the Health Act, and, where necessary, to rectify sanitary evils produced by local inefficiency or apathy. The Department has four full-time inspectors, who assist and instruct the local sanitary inspectors, but full-time district health officers are not provided for. The number of local authorities under the Public Health Act has been reduced to forty-nine since the Local Government Act 1906 came into force. All parts of Tasmania are now furnished with the administrative machinery for local sanitary government.

The Public Health Acts 1917 and 1918 deal with venereal diseases. Regulations under the Public Health Act 1903, as amended, for checking or preventing the spread of any infectious disease, came into force in February, 1918.

The Places of Public Entertainment Act 1917 is administered by the Director of Public Health under the Minister. This Act provides, *inter alia*, for the licensing and regulation of places of public entertainment, for the appointment of a censor or censors of moving pictures, and for the licensing of cinematograph operators. Comprehensive regulations have been framed under the Act. Inspectors under the Public Health Act 1903, are Inspectors of Places of Public Entertainment under this Act.

§ 2. Inspection and Sale of Food and Drugs.

1. **General.**—Under the Acts referred to later, and the regulations made thereunder, the importation of articles used for food or drink, of medicines, and of other goods enumerated, is prohibited, as also is the export of certain specified articles, unless there is applied to the goods a "trade description" in accordance with the Act. Provision is made for the inspection of all prescribed goods which are imported or which are entered for export.

2. **Commonwealth Jurisdiction.**—Under Section 51 (i) of the Commonwealth Constitution Act 1900, the Commonwealth Parliament has power to make laws with respect to trade and commerce with other countries and among the States. By virtue of that power, the Federal Parliament passed the Commerce (Trade Descriptions) Act 1905, to which reference has already been made in Chapter VI.

3. State Jurisdiction.—The inspection and sale of food and drugs are also dealt with in each State, either under the Health Acts or under Pure Food Acts. This work is carried out in each State by the Executive Officer of the Health Department. There is, in addition, a number of Acts dealing with special matters, such as the adulteration of wine and the oversight of bread and meat supply. The supply and sale of milk are also subject to special regulations or to the provisions of special Acts.

The general objects of these Acts are to secure the wholesomeness, cleanliness, and freedom from contamination or adulteration of any food, drug or article ; and the cleanliness of receptacles, places, and vehicles used for their manufacture, storage or carriage. The sale of any article of food or any drug which is adulterated or falsely described is prohibited, as also is the mixing or selling of food or drugs so as to be injurious to health.

Power is given to any authorized officer to enter any place for the purpose of inspecting any article to be used as a food or drug, and also to inspect articles being conveyed by road, rail, or water. The officer may take samples for analysis or examination, and may seize for destruction articles which are injurious to health or unwholesome. Special provision is generally made in the Acts with regard to the sale of preservatives and disinfectants.

In every State except Queensland, Advisory Committees have been appointed for the purpose of prescribing food standards, and for making recommendations generally with a view to carrying out the provisions of the Acts. The duty of enforcing these regulations is entrusted to the local authorities.

4. Food and Drug Standardization.—Conferences with the object of securing uniformity in these matters were held in Sydney in 1910, and in Melbourne in 1913. The resolutions of the latter conference were submitted to the Premiers' Conference held in Melbourne in March, 1914, and in conformity with the determinations arrived at, each State issued regulations which have had the effect of ensuring uniformity throughout Australia.

5. Sale and Custody of Poisons.—In New South Wales, Victoria, Western Australia and Tasmania, the enactments for regulating the sale and use of poisons are administered by the Pharmacy Boards in the respective States. In South Australia, the sale of poisons is provided for by regulations under "The Food and Drugs Act 1908," administered by the Central Board of Health. In Queensland, the sale of poisons is under the control of the Health Department.

In New South Wales, Victoria, and Tasmania the Government formerly subsidized the Pharmacy Board, in order to enable it to carry out the provisions of the Poisons Act. The New South Wales Board does not now obtain a subsidy, as the fees collected are sufficient to defray expenses. The subsidy to the Victorian Board was withdrawn in March, 1921, provision having been made for the payment of a 10s. licence fee under the Poisons Act 1920.

No persons, other than legally qualified medical practitioners and registered pharmaceutical chemists, are permitted to sell poisons, without special licences from the bodies administering the legislation in the respective States. These licences are issued to persons in business distant from four to five miles from a registered chemist, on production of certificates from medical practitioners, police, or special magistrates or justices as to the applicant's character and fitness to deal in poisons. Annual licence fees, ranging from 5s. to 40s., are charged. New poisons regulations were approved in Queensland on the 26th November, 1924, amongst which are stringent restrictions on the sale of cyanide of potassium. A revised list of standard poisons was gazetted in Western Australia in December, 1922.

Special conditions attaching to the sale of poisons were alluded to on p. 1055 of Official Year Book No. 12.

Partial exemptions from the regulations are made in some States in the case of sales of poisons for agricultural, horticultural and photographic purposes, in so far that any person may sell such poisons subject to the restrictions as to the class of container and the manner in which they may be sold. The sale of what are generally known as industrial poisons—such as sulphuric acid, nitric acid, hydrochloric acid, soluble salts of oxalic acid formalin, etc.—is governed by regulations, as also is the sale of poisons for the destruction of rats, vermin, etc. Under the existing laws these poisons may, in most of the States, be sold by any one. The Victorian Parliament, in December, 1920, passed an amending Poisons Act, in which the word "wholesale" has for the first time been defined as meaning "sale or supply for the purposes of re-sale," providing for an annual fee of 10s. and the issuing of licences to dealers in exempted poisons. A new principle is introduced into the Victorian Poisons Act of 1920. Certain drugs are declared to be "potent drugs" and may be sold by pharmaceutical chemists only. These drugs include acetanilid, adrenalin, oil of tansy, pituitary extract, thyroid gland preparations, and any serum or vaccine for human use. Under the Victorian "Dangerous Drugs Regulations, 1922," which came into effect on the 1st January, 1923, further restrictions were imposed on the manufacture and sale of abortifacients and of habit-forming drugs such as ergot, morphine, opium, heroin, cocaine, veronal, etc. Regulations regarding dangerous drugs (cocaine, morphia, etc.) are included in the amended Queensland regulations of 26th November, 1924, referred to above. An amending Poisons Act which came into force in Victoria on 1st January, 1926, prohibits the hawking or peddling of poisons, or the distribution of poisons as samples in any street or public place. Magistrates may order the confiscation of opium smoking pipes and paraphernalia in addition to the opium itself. It is made an offence under heavy penalties for any person to obtain narcotic drugs by false representations or to have any morphine, cocaine, medicinal opium, etc. in his possession without lawful authority.

§ 3. Supervision of Dairies, Milk Supply, etc.

1. **General.**—In Official Year Book No. 12 and preceding issues, allusion is made in general terms to the legislation in force in the various States to ensure the purity of the milk supply and of dairy produce generally, but limits of space preclude the repetition of this information in the present issue.

2. **Number of Dairy Premises Registered.**—The following table shows, so far as the particulars are available, the number of dairy premises registered and the number of cattle thereon. Compulsory registration is not in force throughout the whole area of the various States.

DAIRY PREMISES REGISTERED, AND CATTLE THEREON, 1925.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.
Premises registered ..	21,894	18,029	(*a*)23,000	1,358	331	(*b*)
Cattle thereon ..	913,071	284,638	585,000	8,927	5,370	(*b*)

(*a*) Approximate number of dairies operating. (*b*) Not available.

3. **New South Wales.**—The provisions of the Dairies Supervision Act 1901 extend to the whole of the Eastern and Central Divisions and to all important dairying districts further inland. Other districts are brought under the operation of the Act by proclamation from time to time. Every dairyman, milk vendor, and dairy factory or creamery proprietor is required under penalty to apply for registration to the local authority for the district in which he resides, and also to the local authority of every other district in which he trades. Registration must be applied for prior to commencing trade, and must be renewed annually. The Chief Dairy Inspector is in charge of all inspectorial work under the Dairies Supervision Act 1901, and has assisting him fifteen qualified dairy inspectors, each in charge of a district.

4. **Victoria.**—The registration, inspection and supervision of dairies, dairy farms, dairy produce, milk stores, milk shops, milk vessels, dairy cattle and grazing grounds are provided for by the Dairy Supervision Act 1915, and the Milk Supply Act 1922, administered by the Minister of Agriculture. The supervision of butter and cheese factories is provided for by the Dairy Produce Act 1919. Under the Health Act, however, the Department of Public Health is empowered to take samples of food (including milk, cream, butter, cheese, and other dairy products) for examination or analysis, and to institute prosecutions in case of adulterated or unwholesome food. During the year ended 30th June, 1925, 1,023 samples of milk were analysed by the Public Health Department.

By the end of the year 1925, 117 municipal districts, comprising about one-third of the area of the State, had been brought under the operation of the Dairy Supervision Act. The municipal councils have the option of carrying out the administration of the Act, or of deciding that the work should devolve upon the Department of Agriculture; up to the present all the municipalities in which the Act has been proclaimed have elected for Departmental administration.

The Milk Supply Act 1922 provides for the appointment of a Milk Supply Committee with power to issue regulations to govern the milk supply of the metropolis, and to disseminate information concerning the best methods of handling the product.

The Council of any metropolitan municipality, or a group of councils acting together, may establish depots at which milk may be brought, treated, and sold. The Committee may, however, issue certificates authorizing persons to sell milk, but, in an area in which there is a municipal depot, no milk may be sold unless it has been treated in a depot or, by approved methods, in a factory. Milk sold in containers must have the grade specified on the label. A laboratory has been established to undertake the bacteriological examination of the milk purveyed and generally to carry out researches in matters relating to the milk supply.

5. **Queensland.**—The control and supervision of the milk supply, of dairies, and of the manufacture, sale, and export of dairy produce are provided for by the Dairy Produce Act 1920, administered by the Department of Agriculture and Stock. This Act and the regulations made thereunder apply only to prescribed areas which comprise the whole of the coastal district from Rockhampton down to the New South Wales border, and the Darling Downs, Maranoa, Mackay, and Cairns districts. In certain proclaimed areas the sale of milk is restricted to persons licensed under the Milk Sellers' Regulations of 1924 administered by the Department of Public Health. Milk for sale is supervised by inspectors of the Health Department under the Health Acts 1900–1922. During the year ended 30th June, 1925, 920 samples of milk were analysed.

6. **South Australia.**—The Food and Drugs Act 1908, and the Regulations made thereunder, provide for the licensing of vendors of milk, and the registration of dairies, milk stores and milk shops. The Metropolitan County Board carries out the requirements of the metropolitan area. In the country, the majority of local authorities have not made statutory provision for the licensing of vendors of milk and the registration of dairy premises, and, in consequence, the Central Board of Health provides for such under the Act.

7. **Western Australia.**—Under the provisions of the Health Act, control of dairies throughout the State is in the hands of the Public Health authorities. The premises of dairymen and milk vendors must be registered by a local authority. The inspectors under the Act supervise the sanitary condition of the premises, the examination of herds being carried out for the Health Department by officers of the Department of Agriculture. Inspection of herds is made at regular intervals, and the tuberculin test is applied in cases of suspected disease.

8. **Tasmania.**—Local authorities are responsible for the dairies in their respective districts. By-laws for the registration and regulation of dairies have been drafted by the Public Health Department, and in the majority of cases have been adopted by the local authorities. The Food and Drugs Act 1917 provides that the municipal council of every city or municipality shall submit for analysis such samples of food or drugs as may be specified by the Chief Officer. The sampling is, in the majority of municipal districts, carried out by the Public Health Department, and particular attention is paid to milk. An Act also provides for the registration and inspection of dairies and other premises where dairy produce is prepared, and regulates the manufacture, sale, and export of such produce.

§ 4. Prevention and Control of Infectious and Contagious Diseases.

1. **General.**—The provisions of the various Acts in regard to the compulsory notification of infectious diseases and the precautions to be taken against the spread thereof may be conveniently dealt with under the headings—Quarantine; Notifiable Diseases, including Venereal Diseases; and Vaccination.

2. **Quarantine.***—(i) *General.* The Quarantine Act is administered by the Commonwealth Department of Health, and uniformity of procedure has been established in respect of all vessels, persons, and goods arriving from oversea ports or proceeding from one State to another, and in respect of all animals and plants brought from any place outside Australia. In regard to inter-state movements of animals and plants, the Act becomes operative only if the Governor-General be of opinion that Federal action is necessary for the protection of any State or States; in the meantime the administration of inter-state quarantine of animals and plants is left in the hands of the States. The Commonwealth possesses stations in each State for the purposes of human and of animal quarantine.

(ii) *Administration of Act.* The administration of the Act in respect of the general division, *i.e.*, vessels, persons, and goods, and human diseases, is under the direct control of the Commonwealth in all States except Tasmania. A medical chief quarantine officer, with assistant quarantine officers, has been appointed in each State. This officer is charged with responsible duties, and is under the control of the Director-General of Health. In Tasmania, the chief health officer of the State acts as chief quarantine officer, and payment is made to the State for his services. The administration of the Act in the Northern Territory has been combined with that of Queensland under the chief quarantine officer for the North-eastern division. The administration of the Acts and Regulations relating to oversea animal and plant inspection and quarantine is carried out by the officers of the State Agricultural Departments acting as quarantine officers.

(iii) *Chief Provisions of Act.* The Act provides for the inspection of all vessels including air-vessels, from oversea, for the quarantine, isolation, or continued surveillance of infected or suspected vessels, persons, and goods, and for the quarantining and, if considered necessary, the destruction of imported goods, animals, and plants. The obligations of masters, owners, and medical officers of vessels are defined, and penalties for breaches of the law are prescribed. Power is given to the Governor-General to take action in regard to various matters by proclamation, and to make regulations, to give effect to the provisions of the Act. Quarantinable diseases include small-pox, plague, cholera, yellow fever, typhus fever, leprosy, and any other disease declared by the Governor-General, by proclamation, to be quarantinable. "Vessel" means "any ship, boat or other description of vessel or vehicle used in navigation by sea or air." "Disease" in relation to animals means certain specified diseases, or "any disease declared by the Governor-General by proclamation, to be a disease affecting animals." "Disease" in relation to plants means "any disease or pest declared by the Governor-General, by proclamation, to be a disease affecting plants." The term "plants" means "trees or plants, and includes cuttings and slips of trees and plants and all live parts of trees or plants and fruit."

(iv) *Proclamations.* The proclamations so far issued specify the diseases to be regarded as diseases affecting animals and plants; appoint first ports of landing for imported animals and plants, and first ports of entry for oversea vessels; declare certain places beyond Australia to be places infected or places to be regarded as infected with plague; prohibit the importation (*a*) of certain noxious insects, pests, diseases, germs, or agents, (*b*) of certain goods likely to act as fomites, and (*c*) of certain animals and plants from any or from certain parts of the world; fix the quarantine lines, and define mooring grounds in certain parts of Australia.

(v) *Miscellaneous.* At present, instead of all oversea vessels being examined in every State, as was formerly the case, those arriving from the east and west are now examined only at the first port of call, and pratique is given for the whole of the Commonwealth except in cases of suspicious circumstances, while vessels arriving from the northern routes are examined only at the first and last ports. It is expected that the restrictions placed upon oversea vessels will be further removed as the machinery of quarantine is improved. The present freedom from certain diseases which are endemic in other parts of the world would, however, appear to justify the Commonwealth in adopting precautionary measures not perhaps warranted in the already infected countries of the old world.

3. **Notifiable Diseases.**—A. **General.**—(i) *Methods of Prevention and Control.* Provision exists in the Health Acts of all the States for precautions against the spread, and

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* From information furnished by the Commonwealth Director-General of Health.

for the compulsory notification of infectious diseases. When any such disease occurs, the Health Department and the local authorities must at once be notified. In some States notification need only be made to the latter. The duty of giving this notification is generally imposed, first, on the head of the house to which the patient belongs, failing whom on the nearest relative present, and, on his default, on the person in charge of or in attendance on the patient, and on his default, on the occupier of the building. Any medical practitioner visiting the patient is also bound to give notice.

As a rule the local authorities are required to report from time to time to the Central Board of Health in each State as to the health, cleanliness, and general sanitary state of their several districts, and must report the appearance of certain diseases. Regulations are prescribed for the disinfection and cleansing of premises, and for the disinfection and destruction of bedding, clothing, or other articles which have been exposed to infection. Bacteriological examinations for the detection of plague, diphtheria, tuberculosis, typhoid, and other infectious diseases within the meaning of the Health Acts are continually being carried out. Regulations are provided in most of the States for the treatment and custody of persons suffering from certain dangerous infectious diseases, such as small-pox and leprosy.

(ii) *New South Wales.* The proclamation and notification of infectious diseases are dealt with in Part II. of the Public Health Acts 1902 and 1915. Notification of infectious disease must be made to the local authority by the head of the family, etc., and by the medical practitioner. Provision is made for the disinfection or destruction of premises. Restrictions are placed upon the attendance at school of children suffering from infectious disease or residing in a house in which infectious disease exists. Special provisions have been made with regard to typhoid fever, tuberculosis, small-pox and leprosy, and legislation has been passed dealing with venereal diseases.

(iii) *Victoria.* Under the Health Act 1919 any disease may be declared to be notifiable throughout the State. The occupier of a house containing a case of infectious disease, and the medical practitioner in attendance, must report the fact to the Council. The Medical Officer of Health may order the removal of a patient to a hospital when such is available. The occupier of the house must also inform the head teacher of the school of any child suffering from notifiable disease or residing in an infected dwelling. The notification of venereal diseases is dealt with in the Venereal Diseases Act 1916.

(iv) *Queensland.* Part VII. of the Health Act 1917–1922 stipulates that all cases of infectious disease must be notified by the occupier of the house, and the medical practitioner attending the case. Restrictions are placed on the attendance at school of children suffering from a notifiable disease. Special measures must be taken against typhoid, small-pox, and venereal diseases. Leprosy is dealt with under the Leprosy Act 1892.

(v) *South Australia.* Cases of infectious diseases must be reported to the local board, under the provisions of Part VIII. of the Health Act 1898. The duty of notification rests primarily on the head of the family, and, in addition, the medical practitioner must report the case. Children suffering from or resident with a person suffering from an infectious disease must not attend school till they hold a certificate that there is no risk of infection. Venereal diseases will be dealt with under the provisions of the Venereal Diseases Act, 1920 which, however, is not yet in operation.

(vi) *Western Australia.* The Health Acts 1911 to 1922 provide for the notification and control of infectious diseases, including venereal diseases. The occupier of a house containing a case of infectious disease, and the medical practitioner, must report the case to the local authority. Children may not attend school within three months of suffering from any infectious disease unless they possess a certificate of freedom from infection. Special provisions apply to typhoid fever, tuberculosis, and venereal diseases.

(vii) *Tasmania.* The provisions regarding the notification and prevention of infectious diseases are contained in the Public Health Act 1903 and amending Acts. Notification of cases devolves upon the medical practitioner in attendance or the occupier of the house. Special measures are provided for dealing with typhoid, small-pox, and venereal diseases.

(viii) *Diseases Notifiable in each State.* In the following statement diseases notifiable in each State are indicated by a cross :—

DISEASES NOTIFIABLE UNDER THE HEALTH, ETC., ACTS IN EACH STATE.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.
Acute lobar pneumonia ..	..	..	..	(*c*)	+	..
Anthrax	..	+	..	+	..	..
Ankylostomiasis	..	+	+	..	..	..
Beri-beri	..	..	..	..	+	..
Bilharziasis	..	+	+	+	+	+
Bubonic plague	+	+	+	+	+	+
Cerebro-spinal fever ..	+	+	+	+	..	..
Cerebro-spinal meningitis ..	+	+	+	+	+	+
Chicken-pox	..	..	..	+	..	..
Cholera	..	+	+	+	+	+
Colonial fever	..	..	..	..	+	..
Continued fever	..	..	+	..	+	..
Dengue fever	..	..	..	..	+	..
Diphtheria	+	+	+	+	+	+
Dysentery..	..	+	+(*a*)	..	+	..
Encephalitis lethargica ..	..	+	..	..	..	+
Enteric fever	+	+	+	+	+	+
Erysipelas..	..	..	+	+	+	..
Favus	..	..	..	+	..	..
Hæmaturia	..	..	+	..	+	+
Infantile paralysis	+	+	+	+	+	+
Influenza	..	..	..	+(*c*)	+	..
Leprosy	+	+	+	+	+	+
Low fever	..	..	..	..	+	..
Malarial fever	..	+	+	+	+	+
Malta fever	..	..	..	..	+	..
Measles	..	..	..	+	..	..
Membranous croup ..	+	..	+	+	+	..
Pneumonic influenza ..	..	..	..	+(*c*)	+	+
Polioencephalitis	..	+	..	..	..	..
Poliomyelitis anterior acuta ..	+	..	+	+	+	+
Puerperal fever	..	+	+	+	+	+
Pulmonary tuberculosis (phthisis)	+(*a*)	+	+	..	+	+
Pyæmia	..	..	..	..	+	..
Relapsing fever	..	..	+	+	+	..
Scarlet fever	+	+	+	+	+	+
Scarlatina	+	+	+	+	+	+
Septicæmia	..	..	..	+	+	..
Small-pox	+	+	+	+	+	+
Trichinosis	..	..	..	+	..	..
Tuberculosis	..	+	..	+	..	..
Tuberculosis in Animals ..	..	..	..	+	..	..
Typhoid	+	+	+	+	+	+
Typhus fever	..	+	+	+	+	+
Venereal Diseases :—						
Chancroid (soft chancre) ..	+	+	+	+(*d*)	+	+
Gleet	+	..	..	+(*d*)	+	..
Gonorrhœa	+	+	+	+(*d*)	+	+
Gonorrhœal ophthalmia ..	+	..	..	+(*d*)	+	..
Infective granuloma of the pudenda	+	+	+	+(*d*)	+	..
Ophthalmia neonatorum ..	..	+	..	..	+	+
Syphilis	+	+	+(*b*)	+(*d*)	+	+
Venereal warts	+	..	+	+(*d*)	+	..
Whooping cough	..	..	..	+	..	..
Yellow fever	..	+	+	+	+	..

(*a*) Notifiable in certain areas only. (*b*) Primary and secondary stages only. (*c*) In South Australia influenza vera is notifiable, and any febrile toxic-septicæmic condition similar to influenza, including pneumonic influenza. (*d*) Act not yet in operation.

B. Venereal Diseases.—(i) *General.* The prevention and control of venereal diseases are undertaken by the States. Each State has a Venereal Diseases Act, or provisions in the Health Act govern the working of the measures taken to combat these diseases, In every State notification has been made compulsory. A list of notifiable forms of venereal complaints is given in the table on the preceding page. Steps have been taken to ensure free treatment by medical practitioners or in subsidized hospitals. Registered pharmaceutical chemists are allowed to dispense prescriptions only when signed by medical practitioners. Clinics have been established, and, in some cases, beds in public hospitals have been set aside for patients suffering from these diseases.

Penalties may be imposed on a patient who fails to continue under treatment. Clauses are inserted in the Acts which aim at preventing the marriage of any patient or the employment of an infected person in the manufacture and distribution of foodstuffs.

The Commonwealth Government has granted a subsidy of £15,000 per annum to the various States to assist in providing hospital treatment and administrative control. The supervision of this work, in so far as it relates to the expenditure of the subsidy, is undertaken by the Commonwealth Department of Health. In February, 1922, a conference was held to consider the means of securing the best results from this subsidy.

(ii) *New South Wales.* The Venereal Diseases Act, 1918 came into operation on 1st December, 1920. The Act, which is administered by a Commissioner, aims at ensuring that all cases of venereal disease will have immediate and continued treatment. Clinics have been established at subsidized hospitals. Notification is compulsory; a person suffering from the disease is required to place himself under the treatment of a medical practitioner or to attend a hospital within three days of becoming aware of the existence of the disease, and to continue treatment until a cure is effected. During the year ended 30th June, 1925, notifications numbered 5,445. Satisfactory results are being obtained from action taken in cases where patients have been reported for failure to continue treatment as required by the Act. A number of prosecutions—all of which have been successful—has been undertaken for (*a*) sale of drugs prohibited under the Act, (*b*) treatment of venereal disease by a person other than a medical practitioner, and (*c*) for failing to undergo treatment when required.

(iii) *Victoria.* Under the Venereal Diseases Acts 1916 and 1918 the control of venereal disease is undertaken by the Department of Public Health. The Acts provide for compulsory treatment by qualified medical practitioners of all persons suffering from the disease. All hospitals in receipt of State aid treat patients. Three evening and three day clinics have been established at hospitals in Melbourne, and in June, 1918, a special departmental clinic was instituted. Notification of the disease is compulsory, and 5,711 cases were notified in 1925. Between the 17th June, 1918, and 30th June, 1925, 15,192 cases were treated at the special departmental clinic, the attendances numbering 577,075.

(iv) *Queensland.* The Health Act, 1900–22 confers power on the Commissioner of Public Health to deal with the prevention and control of venereal disease, and affected persons must place themselves under treatment by a medical practitioner. Persons other than medical practitioners are prohibited from treating the disease. Subsidized hospitals are required to make provision for the examination and treatment of cases reported to them, and clinics have been established in Brisbane and nine other towns. Notification is compulsory, and during the year ended 30th June, 1925, 1,503 cases were reported. Visits to the Brisbane clinics numbered 7,584 by males, and 953 by females. Examination of prostitutes is conducted at Brisbane and eleven other towns by medical officers appointed under regulation 10 of the Venereal Diseases Regulations of 1923.

(v) *South Australia.* The provisions of the Venereal Diseases Act 1920 (not yet in operation) are to be carried out by the Inspector-General of Hospitals. The Minister administering the Act may arrange with any public hospital to provide free accommodation and treatment, and may also establish hospitals and arrange for free examinations and free supply of drugs. Persons suffering from venereal disease will be compelled to consult a medical practitioner or attend a hospital and place themselves under treatment. No person other than a medical practitioner may attend or prescribe for patients.

(vi) *Western Australia.* The Health Act gives power to the Commissioner of Public Health to deal with venereal diseases, and persons suffering from these diseases must consult a medical practitioner and place themselves under treatment. No treatment may be given except by qualified medical practitioners. Free examination and treatment are given by subsidized hospitals.

(vii) *Tasmania.* The Public Health Act 1917–1918 authorizes the Director of Public Health to take steps for the control of venereal diseases, and persons affected must place themselves under the care of a medical practitioner or of a hospital. The State-aided hospitals are required to provide treatment. During 1924, 516 cases were notified by medical practitioners. In accordance with an agreement between the Commonwealth and the State authorities, the latter have made provision for the free maintenance and treatment of persons suffering from venereal diseases.

4. **Vaccination.**—(i) *Demand for Vaccine.* In New South Wales there is no statutory provision for compulsory vaccination, though in all the other States such provision has been made. Jennerian vaccine for vaccination against small-pox is prepared at the Commonwealth serum laboratories in Melbourne. A moderate demand exists for the vaccine in Victoria, but in the other States the normal requirements are small. During the years 1912, 1913, and 1914, the output of the vaccine in doses from the dépôt was respectively 65,000, 570,000, and 146,000. The number of doses issued in 1913 was, however, abnormal, and was due to the epidemic of small-pox which broke out in Sydney at the end of June, and was followed by large numbers of vaccinations in each State.

(ii) *New South Wales.* Although there is no provision for compulsory vaccination, public vaccinators have been appointed. No statistics are available as to the proportion of the population which has been vaccinated, but a report of the Principal Medical Officer of the Education Department states that out of 55,740 children medically examined during 1919, 9,487, or 17 per cent., had been vaccinated.

(iii) *Victoria.* Compulsory vaccination, subject to a " conscience " clause, is enforced throughout the State under Part VII. of the Health Act 1919. From the year 1873 up to 31st December, 1918, it is estimated that 72 per cent. of the children whose births were registered were vaccinated. Free lymph is provided. The number of children vaccinated during 1925 was 1,629, or less than 5 per cent. of the births registered.

(iv) *Queensland.* Although compulsory vaccination is provided for under Part VII. of the Health Act, 1900–1922, its operation has not been proclaimed. Vaccination thus being purely voluntary, medical practitioners do not notify vaccinations.

(v) *South Australia.* The Vaccination Act, 1882, which applies to South Australia and the Northern Territory, is administered by the vaccination officer of the State. Under this Act vaccination was compulsory, but in 1917 an Act to suspend compulsory vaccination was passed. There were only 3 vaccinations reported in 1925.

(vi) *Western Australia.* Vaccination is compulsory under the Vaccination Act, 1878, which, however, remains almost a dead letter, seeing that under the Health Act, 1911, a " conscientious objection " clause was inserted, which is availed of by the majority of parents. The number of children vaccinated is very small. All district medical officers are public vaccinators, but they receive no fees for vaccinations.

(vii) *Tasmania.* All infants are nominally required under the Vaccination Act 1898 to be vaccinated before the age of 12 months, unless either (*a*) a statutory declaration of conscientious objection is made, or (*b*) a medical certificate of unfitness is received. Information in regard to vaccinations in recent years is not available.

(viii) *Persons Vaccinated, 1921 to 1925.* Information regarding the number of vaccinations in recent years is not available for all States, and in those States for which figures are supplied the returns are incomplete. In Victoria 1,629 children were vaccinated during 1925, the annual average for the last five years being 2,489. In South Australia there were 3 vaccinations recorded in 1925, and the average for the last five years was only 1. Information is not available for the other States.

5. Commonwealth Serum Laboratories.—The establishment for the preparation of Jennerian Vaccine situated at Royal Park, near Melbourne, formerly known as the "Calf Lymph Dépôt," was in 1918 greatly enlarged by the Commonwealth. The remodelled institution is designated the "Commonwealth Serum Laboratories," and forms a division of the Commonwealth Department of Health. The list of bacteriological preparations produced by the laboratories has been extended to cover a wide range, thus forming a valuable national provision for the protection of public health.

6. Health Laboratories.—The Commonwealth Department of Health has established Health Laboratories at Rabaul in New Guinea, at Bendigo in Victoria, at Townsville, Toowoomba, and Rockhampton in Queensland, at Port Pirie in South Australia, and at Kalgoorlie in Western Australia, and arrangements are being made for the organization of similar laboratories in other parts of Australia.

The laboratory at Rabaul is carried on in conjunction with the hookworm campaign, and is working in close co-operation with the health organization of the New Guinea Administration.

The Bendigo Laboratory was opened in 1922. Besides carrying on the ordinary diagnostic and educational work of a health laboratory, it possesses an X-ray equipment, and undertakes the examination, diagnosis, and treatment of persons suffering from miner's disease and tuberculosis.

The laboratory at Townsville is carried on in conjunction with the Australian Institute of Tropical Medicine at Townsville. The laboratory at Toowoomba was opened on 18th December, 1923.

All of these laboratories are undertaking successfully the diagnostic, educative, and research work for which they were created.

Arrangements have been concluded between the Commonwealth and Western Australian governments for a special medical survey of persons engaged in the mining industry in Western Australia. The work, which will be carried out by the Commonwealth Health Laboratory at Kalgoorlie, was begun in September, 1925, and will be completed in about a year.

7. Industrial Hygiene.—The Industrial Hygiene division of the Commonwealth Department of Health was established in December, 1921. Its objects are the collection of reliable data, the investigation of industrial conditions affecting health, and the issue of advice to employers and employees for the improvement of conditions of work and for the safeguarding of health. Publications have been issued dealing with the scope of industrial hygiene, and with health hazards in industry. Expert advice is available to employers and employees, and it is anticipated that the work of the division will be of great value in guiding the development of industry along hygienic lines, and in improving generally the condition of workers. With a view to the adoption of a concerted scheme of action and a uniform basis for standards and records throughout Australia, conferences of delegates from the State Health and Labour Departments and the Commonwealth Department of Health were held in 1922 and in 1924.

A special article entitled "Industrial Hygiene in Australia" will be found in Official Year Book No. 18, pp. 522 to 555.

8. Public Health Engineering.—A division of sanitary engineering was established in the Commonwealth Department of Health early in 1923. Investigation has been made into numerous sanitary engineering problems affecting Australia, including a number referred to the Department by various State Governments. Advice is given generally on the protection of water supplies, drainage, and other engineering questions affecting health.

§ 5. Tropical Diseases.

1. General.—The remarkable development of parasitology in recent years, and the increase in knowledge of the part played by parasites in human and animal diseases, have shown that the difficulties in the way of tropical colonization, in so far as these arise from the prevalence of diseases characteristic of tropical countries, are largely removable by preventive and remedial measures. Malaria and other tropical diseases are coming more and more under control, and the improvements in hygiene which science has accomplished, furnish a new outlook on the question of white settlement in countries formerly regarded as unsuitable for colonization by European races. In Australia, the most important aspect of this matter is at present in relation to such diseases as filariasis, malaria, and dengue fever, which, although practically unknown in southern Australia, occur in many of the tropical and sub-tropical parts.

2. **Transmission of Disease by Mosquitoes.**—(i) *Queensland.* The existence of filariasis in Queensland was first discovered in 1876. The parasite of this disease is transmitted by *Culex quinquefasciatus* (*Culex fatigans*), the mosquito most prevalent in Queensland. The mosquito *Aëdes aegypti* (*Stegomyia fasciata*), conveyor of yellow fever (and probably of dengue fever also), is another common domestic mosquito throughout Eastern Queensland during the summer, but so far has never been infected from abroad. Occasional limited outbreaks of malaria occur in the northern parts of the State ; one at Kidston, in 1910, resulted in 24 deaths. The infection was traced to newcomers from New Guinea. Allusion to the efforts made to deal with the mosquito, under the Health Act of 1911, will be found in Official Year Book No. 12, p. 1063. By an Order in Council the local authorities are now responsible for the taking of measures for the destruction and the prevention of breeding of mosquitoes.

(ii) *Other States.* In Western Australia it is stated that malaria is not known to exist south of the 20th parallel, while filariasis has never been discovered. Mosquito-borne diseases are unknown in Victoria, South Australia, and Tasmania, except for very rare sporadic cases, and it is stated that filariasis is uncommon in New South Wales, the only cases known being imported ones. Kerosene and petroleum have been successfully used, both by municipalities and private individuals, to destroy larvae of mosquitoes at various places in these States.

(iii) *Northern Territory.* While the Territory is conspicuously free from most of the diseases which cause such devastation in other tropical countries, malaria exists, and, although cases rarely end fatally, the Administration is taking measures for the destruction of mosquito larvae wherever settlements or permanent camps are formed, and precautions are being taken to prevent the collection of stagnant water in such localities.

3. **Control of Introduced Malaria and Bilharziasis.**—(i) *General.* The control of returned soldiers and sailors suffering from malaria and bilharziasis, which was undertaken by the Commonwealth Department of Health at the request of the Departments of Defence and Repatriation, is still being carried out in conjunction with State Health Departments.

(ii) *Malaria.* Steps were taken to have all recrudescences in returned sailors, soldiers, and nurses in all parts of Australia notified direct to the Commonwealth Department of Health by the Medical Officers of the Repatriation Local Committees. Malaria is also notifiable to each State Health Department, except in New South Wales, and particulars of such notifications are transmitted to the Commonwealth Department of Health.

Treatment on intensive lines has been regularly carried out in connexion with malaria recurrences in returned sailors and soldiers in order to effect a cure as rapidly as possible. Steps were also taken to prevent the settlement of malaria-infected individuals in localities such as irrigation areas, where mosquitoes capable of carrying malaria were known to exist.

From information received, it is evident that in the great majority of cases cure has now been established, and that where recrudescences do occur they have been greatly reduced in severity and frequency. The number of foci of infection has been reduced to unimportant dimensions, and the danger of spread of malaria in the community from this source has been practically eliminated.

(iii) *Bilharziasis.* With few exceptions the men who contracted this disease on active service have been brought in from all parts of Australia for expert re-examination and treatment.

Those who have suffered from the disease, and have undergone treatment as indicated above, are still kept under periodical observation, but owing to the success of the measures already taken it is believed that no danger of the spread of infection exists. Action is being taken in the case of a small number of men who have evaded treatment.

4. Hookworm.—In 1911, attention was drawn to the necessity for an investigation into ankylostoma infection in Queensland, and the view was expressed that notified cases did not accurately indicate the prevalence of the disease. Researches made subsequently tended to support this view.

An investigation made in Papua in 1917 by an officer of the International Board of Health of the Rockefeller Foundation disclosed the fact that half of all natives examined were infected with hookworm disease. In co-operation with the Government of Queensland and the Australian Institute of Tropical Medicine, the survey was extended to Queensland, and a considerable number of cases of ankylostoma infection was found in certain northern coastal areas. In October, 1919, the Australian Hookworm Campaign was begun. This campaign was supported jointly by the Commonwealth, the International Health Board of the Rockefeller Foundation, the State of Queensland, and the other States in which work in this direction was undertaken. By the end of 1922, the survey of Australia and its dependencies had been completed. The total number of examinations up to 30th September, 1924, including those in Dr. Waite's survey in Papua and the earlier work in Queensland, was as follows :—

People examined for hookworm disease	394,578
Found to be infected with hookworms	62,051 (15.7%)

Endemic hookworm infection was found in intermittent areas along the eastern coast of Australia from Cape York to Macksville in New South Wales. The higher summer rainfall in these areas appears to be chiefly responsible for the localization of the infection. It is also found in the vicinity of Broome and Beagle Bay in Western Australia, in the northern part of the Northern Territory, and along the eastern coast of the Gulf of Carpentaria. In the Territory of Papua, 59.2 per cent. of the natives were found to be infected, and in the Territory of New Guinea, 74.2 per cent. There is no endemic hookworm infection in Victoria, South Australia, Tasmania, the interior of Queensland, New South Wales, except the north-eastern part, and Western Australia except the far north.

Metalliferous mines were examined in Victoria, South Australia, New South Wales, Tasmania, and Western Australia, and were found entirely free from hookworm infection. The examination of metalliferous mines in Queensland showed either no infection or a light infection which may have originated chiefly outside the mines. Coal mines in Victoria, Tasmania, and Western Australia were free from infection. Examinations were made in the coal mines of the Newcastle district, and among 1,226 miners examined in about 25 mines only five infected miners were found. In the Ipswich group of coal mines in Queensland, 31.5 per cent. of the miners were infected, and in the Howard-Torbanlea group (Queensland) 75.8 per cent. were infected. Recommendations were made with regard to the correction of the insanitary conditions responsible for these high infection rates.

Wherever operations are carried on by the hookworm campaign, emphasis is placed on the prevention of hookworm disease, in contrast to temporary relief through the cure of existing cases, and much work has been done to improve methods of night-soil disposal, and to teach the people the danger from soil pollution.

In October, 1924, the International Health Board withdrew from the work which was then continued under the direction of the Division of Tropical Hygiene of the Commonwealth Department of Health. From 1st October, 1924, to 31st December, 1925, under the new administration the two field units engaged in the investigation examined 50,354 persons, of whom 4,430, or 8.8 per cent., were found to be infected with hookworm.

In the latter part of 1922, the scope of the campaign was widened to include a malaria and filaria survey in co-operation with the Division of Tropical Hygiene, Commonwealth Department of Health. This work is being carried out as opportunity arises.

A number of epidemiological and microbiological problems relating to hookworm and other intestinal parasites in tropical and sub-tropical Australia is being investigated by the Australian Institute of Tropical Medicine and the Commonwealth Health Laboratories in Queensland in co-operation with the work of the field units. It is anticipated that useful information will be obtained in regard to the control of hookworm among white people in the tropical and sub-tropical regions of Australia.

5. Institute of Tropical Medicine, Townsville.—The Australian Institute of Tropical Medicine was founded at Townsville in January, 1910. Since 7th March, 1921, the Institute has been administered by the Commonwealth Department of Health. A full account of the activities of this Institute from its foundation up to 1922 will be found in Official Year Book No. 15, pp. 1010–1012.

Since 1922 a number of investigations has been carried out, including the physiology of white populations in the tropics, sociological survey of certain tropical areas of Queensland, the destruction of mosquito larvæ and the control of mosquitoes in the larger centres of population, tropical diseases among the aboriginals on Palm Island, leprosy among aboriginals in the Northern Territory, and reputed foci of malaria in tropical Queensland. Courses of instruction in tropical medicine and hygiene have also been given, and eight publications dealing with various aspects of tropical medicine, etc., have been issued.

6. Royal Commission on National Health.—This Royal Commission, which was appointed by the Commonwealth Government in December, 1924, submitted its report on 9th December, 1925. The report deals with and contains recommendations on the following subjects :—Ill-health in the Commonwealth ; medical services ; co-operation of Commonwealth and State health authorities ; prevention of disease ; venereal diseases ; uniform legislation with regard to the purity of food and drugs ; maternity hygiene ; child welfare ; industrial hygiene ; encouragement and development of research work ; relationships between public health authorities and medical practitioners, and between public health authorities and other public authorities rendering medical services ; and the publication of information relating to public health.

7. Travelling Study Tours under the League of Nations.—The Health Organization of the League of Nations has, during the past three years, arranged a series of study tours for medical officers of health of various countries, with resultant benefit by reason of interchange of views to those who have taken part in them. For the purposes of enabling officers to gain experience in public health methods, the Commonwealth Government was invited to nominate representatives for two such tours in 1925, one for three months' travel in Western Europe, and the other for a six weeks' visit to Japan and the neighbouring Asiatic countries.

For the tour in Japan and neighbouring Asiatic countries the Director of Tropical Hygiene in the Commonwealth Department of Health was nominated, and this officer during the latter part of 1925 visited Japan and took part in the Conference of Medical Officers held at Tokio. Several other places of interest to Australia from the public health standpoint were visited, including Korea, Manchuria, Shanghai, and Manilla, and much valuable information was accumulated.

The Director of the Division of Marine Hygiene in the Commonwealth Department of Health visited Europe during the latter part of 1925, and studied public health methods and administration in various countries.

An offer from the League of Nations of two further tours to officers of the Department of Health for the purpose of studying laboratory methods and administration in Western Europe and England was accepted by the Commonwealth Government for the year 1926. The Director and Assistant Director of the Laboratories Division in the Commonwealth Department of Health who were nominated for these tours left Australia for Europe in March, 1926.

8. International Sanitary Convention.—A Conference of representatives of the various signatory countries to the International Sanitary Convention of Paris of January, 1912, was held in Paris in April, 1925, to consider the draft proposals prepared by the International Office of Public Health for the revision of the Convention.

The Director of the Division of Marine Hygiene represented the Commonwealth at this Convention.

9. Far Eastern Epidemiological Bureau, Singapore.—Under the auspices of the League of Nations, a Conference of the Advisory Committee of the Eastern Intelligence Bureau of the Far East was held at Singapore in January, 1926, and was attended by medical officers representing Australia, British India, British North Borneo, China, Federated Malay States, Hong Kong, French Indo-China, Japan, Netherlands Indies, Spain, and the Straits Settlements, while three medical representatives of the League of Nations, an observer on behalf of the Philippine Islands, and a visitor on behalf of the International Health Board under the Rockefeller Foundation were also present. The Director, Division of Tropical Hygiene in the Department of Health, represented the Commonwealth.

§ 6. Medical Inspection of School Children.

1. **General.**—Medical inspection of school children is carried out more or less thoroughly in all the States. Medical staffs have been organized, and in some States travelling clinics have been established to deal with dental, ocular, and other defects.

2. **New South Wales.**—A system of medical inspection of school children was organized in 1913, and arrangements have been made, by means of triennial examinations, to examine each child at least twice during the period of school attendance (compulsory between the ages of 7 and 14 years). For this purpose, the staff attached to the Education Department consists of 19 Medical Officers, 19 Dentists (including 8 part-time Dentists), 8 Nurses, 15 Dental Assistants, and a clerical staff of 12.

Parents are notified of their children's defects, and are urged to have them treated. In the metropolitan district, children may be treated as out-patients at hospitals (general and special), or at the two School Dental Clinics. During 1923, the second School Dental Clinic was established at the out-patient department, Children's Hospital, chiefly to obtain strict oral and dental cleanliness before operations on the nose and throat.

In remote and sparsely-settled country districts, defects of vision are provided for by two School Oculists. One of these is in charge of the Travelling Hospital, which now includes on its staff two Dental Officers, one Nurse, and one Dental Assistant. During 1924, the number of children examined by the staff of the Travelling Hospital was 2,124; 1,696 were treated for all defects, 1,577 of which were dental. The remaining nine Travelling Dental Clinics treated 16,260 children, and the School Dental Clinics in Sydney, 7,009 (5,860 at the Metropolitan Clinic, and 1,149 at the Children's Hospital).

Of the 101,100 examined during 1924, 98,976 were seen during the routine medical inspection. Of these latter, 45,875 (46.3 per cent.) were notified for treatment of various defects, and of those notified, 25,431 (55.4 per cent.) were treated. This does not include the Travelling Hospital's returns, which are shown above, nor does it include the majority of those treated for dental defects by Departmental Officers, who carried out dental treatment for 24,846 children—17,837 rural and 7,009 city—or approximately 30 per cent. rural and 17 per cent. city of the children of the areas visited.

Eliminating dental defects, unremedied medical defects were found in 18.5 per cent. of children. In rural areas, 42.9 per cent. of those notified were treated by "outside" doctors or hospitals. In the city, 45.6 per cent. to 64.5 per cent. were treated for various types of defect. Much of this improvement is due to the following-up work of the School Nurses.

During the three triennial periods ended 1922, 612,414 children were examined, and 355,765 (58 per cent.) were found to be suffering from physical defects requiring treatment. Only about 46 per cent. of these cases received treatment.

In the triennium ended 1922, 185,770 children were medically examined (inclusive of those dealt with by the Travelling Hospital, but excluding those examined by the travelling dental clinics). Of this total 96,764 (52 per cent.) were recorded as defective. The chief defects were:—Dental, 74,476 cases; nose and throat, 25,152 cases; vision, 10,598 cases; and hearing, 5,029 cases. The number of children treated subsequently for any defect was 52,065.

In addition to the routine examination of primary school children, the examination of 1,635 delinquent boys at the Metropolitan Children's Shelter was carried out in 1924 by a Specialist Officer, and a physical and mental estimate provided for use of the Magistrate of the Children's Court.

The health supervision of High School girls in the Sydney and Newcastle Districts is allotted to a special woman Medical Officer; while another woman Medical Officer is attached to the Teachers' College. Every teacher, on entering the College, is medically examined, and any defects found must be remedied. The teaching of hygiene is aided by a course of thirty lectures which each student receives at the Teachers' College.

In 1925, certain changes were made in the general scheme. The extra-metropolitan area was divided into three and the metropolis into seven districts, and medical officers allotted accordingly. The work in the metropolis was arranged to permit of an annual, instead of a triennial, visit to every school, but about one-third only of the children will be examined at each visit, viz., entrants, pupils leaving, and cases which are still under review.

3. **Victoria.**—The system of medical inspection aims at examining the child three times in its school life, but in the High Schools the students are examined every two years. After the examination, the parents are notified of defects, and are advised to obtain treatment from their own doctor or dentist, and in the metropolitan area two nurses follow up these cases. Attached to the department is a dental centre which deals with about 830 children each month from the metropolitan schools.

During the year ended 30th June, 1925, 19,289 children were medically examined, and 9,128 received dental treatment. In addition, the nurses of the Bush Nursing Association examine the school children in their districts and report to the Medical Officers of the Education Department, who, in their turn, advise whether medical attention is necessary.

The staff of the medical branch is being strengthened by the appointment of additional officers, and will consist of 8 medical officers, 5 dentists, 6 dental attendants, and two school nurses. It is proposed to appoint an oculist.

4. **Queensland.**—In matters affecting the general administration of the medical branch of the Department of Public Instruction, the Department acts on the advice of the Commissioner of Public Health. There is no permanent professional officer in charge of the work, the medical inspection being carried out by part-time local medical practitioners who examine a large number of children each year, and advise parents of physical defects calling for medical attention. A staff of eleven dentists carries out dental inspection and treatment. Particular attention is paid to diseases of the eyes and tonsils. In the Western Districts, where ophthalmic diseases formerly were rife, the medical officers in charge of district hospitals are employed to treat cases promptly and thereby prevent the spread of infection.

In 1925, 34,952 children were medically examined, of whom 6,772 were found to be suffering from physical defects. The departmental dentists examined 19,768 children. Extractions numbered 20,857, fillings 20,243, and other gratuitous treatments 7,818.

5. **South Australia.**—Medical inspection embraces the examination—three times in their school life—of all children attending the primary schools or entering high or technical schools. Reports are furnished to parents of defects likely to interfere with educational progress. The staff consists of one principal medical officer, five medical inspectors, three dentists, five trained nurses, and a disinfecting officer. The dentists attend remote country schools and treat children. There is also a Dental Clinic where children from the metropolitan schools receive treatment. The Medical Inspector meets the parents after the examination of the children, reports any defect, and recommends treatment. It is found that a personal talk is of greater value than a written notice. A trained psychologist is attached to the medical branch.

During the year 1925, 506 schools were visited, and children to the number of 38,715 were examined by the medical officer, and a considerable number of defects was disclosed. The school dentists gave treatment to 632 children in the City Clinic and 1,324 children in the outback districts of the State.

6. **Western Australia.**—Under the Public Health Act 1911–1922, the medical officers of health appointed by the local authorities became medical officers of schools and school children. In the Health Department there are two medical officers for schools, whose duty is to conduct medical examinations, and three school nurses are employed. During 1925, 7,163 children were examined.

7. **Tasmania.**—To Tasmania belongs the credit of being the first State in Australia to provide for the medical inspection of State school children. As far back as 1906, 1,200 children from the Hobart State schools were examined. At the present time 2 full-time medical officers carry out medical inspections in country and convent schools, while 2 part-time medical officers conduct examinations of school children in Hobart and Launceston. There are also 4 nurses, whose chief duty is to visit the homes to advise the parents as to the treatment of defects disclosed by the medical examination. Country schools are visited by medical officers about once every two years, while 2 dentists have been appointed to visit the smaller country schools.

§ 7. Supervision and Care of Infant Life.

1. **General.**—The number of infantile deaths and the rate of infantile mortality for the last five years are given in the following table, which shows that during the period 1921 to 1925 no less than 39,315 children died before reaching their first birthday. With the exception of New South Wales for the years 1921 and 1924, and Tasmania for the year 1921, the rate of mortality in the metropolitan area has in every case been consistently greater than that for the remainder of the State. Further information regarding infantile mortality will be found in Chapter XXV.—Vital Statistics :—

INFANTILE DEATHS AND DEATH RATES, 1921 TO 1925.

State.	Metropolitan.					Remainder of State.				
	1921.	1922.	1923.	1924.	1925.	1921.	1922.	1923.	1924.	1925.
NUMBER OF INFANTILE DEATHS.										
New South Wales	1,437	1,292	1,431	1,299	1,282	1,981	1,665	1,846	1,866	1,719
Victoria	1,381	1,101	1,345	1,289	1,155	1,201	835	1,011	927	892
Queensland ..	382	347	362	367	318	719	660	716	644	599
South Australia ..	452	347	388	337	287	332	223	317	258	241
Western Australia	318	247	258	232	280	293	205	184	182	183
Tasmania ..	119	120	105	94	101	330	204	220	202	187
Australia (*b*) ..	4,089	3,454	3,889	3,618	3,423	4,856	3,792	4,294	4,079	3,821
RATE OF INFANTILE MORTALITY.(*a*)										
New South Wales	62.38	57.68	63.26	57.18	56.74	63.01	50.81	58.70	60.22	53.68
Victoria	73.82	58.25	71.18	66.32	59.81	71.13	48.03	59.54	55.49	53.70
Queensland ..	61.81	57.10	57.89	57.76	49.71	50.82	44.96	52.15	48.22	43.14
South Australia ..	73.64	58.23	66.70	56.45	48.95	56.89	36.73	53.96	45.89	43.08
Western Australia	80.55	58.27	61.24	53.13	65.71	75.93	52.67	50.54	46.26	49.64
Tasmania ..	75.17	71.94	66.00	61.32	67.83	79.09	49.17	54.11	52.47	50.15
Australia (*b*) ..	68·62	58·33	65·48	59·92	57·13	63·48	48·50	56·69	54·79	50·43

(*a*) Number of deaths under one year per 1,000 births registered. (*b*) Exclusive of Territories.

During recent years greater attention has been paid to the fact that the health of the community depends largely on pre-natal as well as after care in the case of mothers and children. Government and private organizations are, therefore, taking steps to provide instruction and treatment for mothers before and after confinement, while the health and well-being of mother and child are looked after by the institution of baby health-centres, baby clinics, crèches, visitation by qualified midwifery nurses, supervision of milk supply, etc.

2. **Government Activities.**—In all the States Acts have been passed with the object of supervising and ameliorating the conditions of infant life and reducing the rate of mortality. Government Departments control the boarding-out to suitable persons of the wards of the State, and wherever possible the child is boarded-out to its mother or near female relative. Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons, while special attention is

devoted to the welfare of ex-nuptial children. (See also in this connexion Chapter XI.—Public Benevolence.) Under the provisions of the Maternity Allowance Act 1912, a sum of five pounds is payable to the mother in respect of each confinement at which a living or viable child is born. Further particulars regarding Maternity Allowance are given in Chapter VIII.—Finance.

3. **Nursing Activities.**—(i) *General.* In several of the States, the Government maintains institutions which provide treatment for mothers and children, while, in addition, subsidies are granted to various associations engaged in welfare work.

(ii) *New South Wales.* Baby health centres were established by the Government in 1914. Attached to each centre is an honorary medical officer and a staff of trained nurses who instruct mothers in matters pertaining to the care of themselves and their children. In March, 1926, there were 55 centres in operation, of which 31 were in the metropolitan area and the remainder in important industrial and rural centres. During 1925 the attendances at the clinics numbered 190,323, and the nurses paid 83,757 visits to homes. No charge is made for attention or advice.

The Royal Society for the Welfare of Mothers and Children conducts two welfare centres in the metropolis, and has two training schools where nurses may receive post-graduate training in infant hygiene and mothercraft. The nurses attached to health centres are required to take this course, and arrangements have been made to train the nurses engaged by the Bush Nursing Association. The Day Nursery Association maintains three nurseries where working mothers may leave their children during the day.

The Bush Nursing Associations aim at providing fully-qualified nurses in country districts throughout Australia. Centres may be formed in any district where the residents can enrol sufficient members to guarantee the salary of a nurse. As the greater part of the nurses' work is that of midwifery, the nurses must be registered midwives. In January, 1925, there were 30 bush-nursing centres in New South Wales.

(iii) *Victoria.* The first Baby-Health Centre was opened in 1917. At the latest available date the Victorian Baby-Health Centres' Association had 64 centres in operation, 44 in the metropolitan area, and 20 in country towns. The Association receives subsidies from the State Government and the local municipal councils. During the year ended 30th June, 1925, attendances at the centres numbered 132,796, while 50,035 visits were paid by the nurses to patients in their own homes. The Society for the Health of Women and Children also maintains six centres and two sub-centres in the industrial suburbs of the metropolis and one centre in the country. There are, in addition, crèches where children may be left while the mothers are at work.

The Bush Nursing Association had in February, 1926, 50 centres in operation in the country districts. In connexion with this association there are six cottage hospitals in operation and others are in process of preparation.

(iv) *Queensland.* Four Baby Clinics have been established in Brisbane by the Government, and others have been formed in nine of the larger provincial centres. A training school has been organized to train nurses for welfare work. For the year 1925 attendances at the clinics numbered 63,241, in addition to which the nurses paid 15,222 visits in connexion with the after care of mothers and infants.

There are in the metropolitan area six kindergartens and four crèches where children may be left during the day. The Playgrounds' Association aims at providing playgrounds for children in the populous parts of towns and cities.

The Bush Nursing Association has nine nurses stationed in the country districts.

(v) *South Australia.* A School for Mothers is situated in Adelaide, and there are several branches in the suburbs, and at Port Pirie and Renmark. These schools receive a Government and municipal grant. During the year ended 31st July, 1925, the nurses paid 1,415 visits to expectant mothers and 22,858 to young babies. In August, 1921, baby clinics were established, to which, in 1924–25, 27,790 babies were brought for examination, advice and information being given where necessary to the mothers. There is a crèche at West Adelaide for the benefit of the children of women obliged to earn their own living.

The District Trained Nursing Society has over 30 branches, of which about half are in the metropolitan area. The nurses of this society paid 64,686 visits to homes. Nursing homes have been established by the Australian Inland Mission at Beltana and Oodnadatta in the far north of South Australia, and at three places in the Northern Territory.

(vi) *Western Australia.* The organizations which aim at improving the conditions of infant life include an ante-natal clinic established by the Government at the King Edward Maternity Hospital, a day nursery where children may be left and cared for while the mothers are away at work, and the Infant Health Association, which is subsidized by the government and local authorities, and which controls seven centres, with a specially trained nurse in charge of each.

The Bush Nursing Trust maintains a rest-house for expectant mothers, and the Australian Inland Mission has nursing homes at Hall's Creek and Port Hedland.

(vii) *Tasmania.* There are three baby clinics in Hobart and two in Launceston controlled by Child Welfare Associations. During the year 1925, the nurses visited 11,254 homes, and attendances at the clinics for the same period numbered 15,773. The number of individual babies taken to the clinics was 1,737. A mother-craft home was opened in Hobart in August, 1925, with accommodation for 10 babies and 4 mothers. During the five months, 10 mothers and 40 babies were inmates of the home and 4 trained nurses completed a special course in infant hygiene.

The Bush Nursing Association, which is subsidized by the Health Department, the Red Cross Fund, and municipal councils, has stationed nurses in twelve country districts.

(viii) *Summary.* The following table gives particulars of the activities of the Baby-Health Centres and the Bush Nursing Association :—

Heading.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
Baby Health Centres :—							
Metropolitan No.	33	52	4	33	6	5	133
Rural .. No.	24	21	9	5	1	..	60
Total No.	57	73	13	38	7	5	193
Attendances at Centres .. No.	190,323	132,796	63,241	27,790	8,658	15,773	438,581
Visits paid by Nurses .. No.	83,757	50,035	15,222	64,686	6,173	11,254	231,127
Bush Nursing Association Number of Centres	30	50	9	(a) 30	1	12	132

(a) District Trained Nursing Society.

CHAPTER XIII.—LABOUR, WAGES, AND PRICES.

A. PRICES.

§ 1. Wholesale Prices.

1. **General.**—The results of an investigation into wholesale prices in Melbourne from 1871 to the end of September, 1912, were given in some detail in Report No. 1 of the Labour and Industrial Branch, while summarized results for later years are included in subsequent Reports.

The index-numbers up to the year 1911 are based on the prices of eighty commodities, but since that year the number has been increased to ninety-two.* The methods followed for the computation of the wholesale price index-numbers are similar to those adopted in regard to retail prices. The commodities included, the units of measurement for which the prices are taken, and the mass-units indicating the relative extent to which each commodity is used or consumed, are shown in a tabular statement in Labour Report No. 13 (page 62).

2. **Index-Numbers.**—Index-numbers have been computed for each group of commodities, as well as for all groups together. The index-numbers for the several groups, and for all groups together, are shown in the following table, and in each case were computed with the prices in the year 1911 as base. They show, for each of the years specified, the expenditure necessary—if distributed in purchasing the relative quantities (indicated by the mass-units) of the several commodities concerned—to purchase what would have cost £1,000 in 1911. Thus, from the last column it will be seen that the cost of the relative quantities of the various commodities was 1,229 in 1871, and 974 in 1901, as compared with 1,000 in 1911, 1,903 in 1921, and 1,844 in 1925. In other words, prices were lower in 1911 than in either 1871, 1921, or 1925, and the purchasing power of money in 1911 was, accordingly, greater. Again, prices were lower in 1901 than in 1911, and the purchasing power of money in the former year was, therefore, greater.

INDEX-NUMBERS.—WHOLESALE PRICES, MELBOURNE, 1861 TO 1925.

Year.	I. Metals, and Coal.	II. Jute, Leather, etc.	III. Agricultural Produce, etc.	IV. Dairy Produce.	V. Groceries.	VI. Meat.	VII. Building Materials.	VIII. Chemicals.	All Commodities together.
1861 ..	1.438	1,881	1,583	1,008	1,963	..	1.070	2,030	**1,538**
1871 ..	1,096	1,257	1,236	864	1,586	..	1,044	1,409	**1,229**
1881 ..	1,178	1,115	1,012	935	1,421	..	1,091	1,587	**1,121**
1891 ..	895	847	1,024	995	1,032	888	780	1,194	**945**
1901 ..	1,061	774	928	1,029	1,048	1,345	841	917	**974**
1902 ..	1,007	756	1,193	1,215	945	1,447	837	881	**1,051**
1903 ..	923	834	1,209	1,059	936	1,443	875	921	**1,049**
1904 ..	821	885	754	876	916	1,427	845	875	**890**
1905 ..	772	850	894	980	942	1,209	801	859	**910**
1906 ..	882	978	916	972	923	1,110	896	864	**948**
1907 ..	1,037	1,017	973	1,020	948	1,294	968	961	**1,021**
1908 ..	1,033	901	1,312	1,198	968	1,335	935	891	**1,115**
1909 ..	1,014	907	1,000	1,119	978	1,088	911	815	**993**
1910 ..	1,004	1,052	969	1,100	999	1,008	996	898	**1,003**
1911 ..	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**
1912 ..	1,021	991	1,370	1,206	1,052	1,357	1,057	978	**1,170**
1913 ..	1,046	1,070	1,097	1,054	1,024	1,252	1,128	995	**1,088**
1914 ..	1,099	1,032	1,207	1,137	1,021	1,507	1,081	1,253	**1.149**
1915 ..	1,284	1,017	2,162	1,530	1,133	2,435	1,275	1,528	**1,604**
1916 ..	1,695	1,423	1,208	1,485	1,322	2,515	1,491	1,760	**1,504**
1917 ..	2,129	2,008	1,157	1,423	1,343	2,403	1,884	2,171	**1,662**
1918 ..	2,416	2,360	1,444	1,454	1,422	2,385	2,686	3,225	**1,934**
1919 ..	2,125	2,363	1,985	1,651	1,516	2,348	2,851	2,898	**2,055**
1920 ..	2,298	2,624	2,439	2,209	1,918	3,279	3,226	2,825	**2,480**
1921 ..	2,173	1,362	1,767	2,000	1,976	2,158	2,733	2,303	**1,903**
1922 ..	1,942	1,681	1,628	1,648	1,869	1,787	2,005	1,965	**1,758**
1923 ..	1,826	2,148	1,778	1,837	1,746	2,579	2,025	1,933	**1,944**
1924 ..	1,835	2,418	1,647	1,655	1,721	2,223	1,815	1,806	**1,885**
1925 ..	1,852	1,967	1,797	1,636	1,723	2,212	1,711	1,790	**1,844**

NOTE.—The figures given in this table are comparable in the vertical columns, but are not directly comparable horizontally. The index numbers are reversible.

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* In the computation of the index-numbers for years prior to 1911, the aggregate expenditure on 80 commodities in 1911 is taken as base (= 1,000), while for later years the aggregate expenditure on 92 commodities is taken.

3. **Fluctuations, July, 1914, to May, 1926.**—Since the outbreak of war, prices of many commodities have increased considerably. This is shown in the following table in which the index-numbers are given for each group for the months of July, 1921, to 1925, and May, 1926, taking July, 1914, the last month before the outbreak of war, as base (= 1,000) for each group :—

INDEX-NUMBERS.—WHOLESALE PRICES, MELBOURNE, JULY, 1914, TO 1925, AND MAY, 1926.

articulars.	I. Metals and Coal.	II. Jute, Leather etc.	III. Agricultural Produce, etc.	IV. Dairy Produce.	V. Groceries.	VI. Meat.	VII. Building Materials.	VIII. Chemicals.	All Groups.
uly, 1914 ..	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**
,, 1921 ..	1,945	1,107	1,579	1,655	1,881	1,191	2,377	2,198	1,589
,, 1922 ..	1,764	1,555	1,532	1,564	1,810	1,185	1,681	1,991	1,569
,, 1923 ..	1,658	1,876	1,691	1,668	1,698	2,229	1,780	1,923	1,799
,, 1924 ..	1,666	2,119	1,525	1,431	1,677	1,281	1,666	1,743	1,626
,, 1925 ..	1,663	1,744	1,643	1,404	1,667	1,492	1,605	1,716	1,618
May, 1926 ..	1,848	1,508	1,839	1,636	1,679	1,459	1,471	1,732	1,669

§ 2. Retail Prices and House Rents.

1. **Introduction.**—(i) *General.* In Labour Report No. 1, issued in December, 1912, the results of certain investigations into the subjects of Prices, Price-Indexes and Cost of Living in past years were published, and some account was given of the methods employed for the collection of the data and of the technique adopted in the computation of the results. A detailed examination of the theory upon which the calculation of the index-numbers is based was given, but being necessarily too technical for the ordinary reader, was relegated to Appendixes. In Labour Reports Nos. 2, and 5 to 15, results of further investigations were included, and in Labour Bulletins Nos. 1 to 18, and in Quarterly Summaries of Statistics, Nos. 70 to 98, information was incorporated regarding variations in retail and wholesale prices, house rent, and purchasing-power of money up to the end of 1924.

(ii) *Computation of Index-Numbers.* The method adopted for the computation of the index-numbers is what is termed the " aggregate expenditure " method. Thereunder the average price of each commodity included is ascertained, and numbers (called " mass-units ") representing the *relative* extent to which each commodity was on the average used or consumed are also computed. The price in any year of each commodity multiplied by its corresponding " mass-unit " represents, therefore, the relative total expenditure on that commodity in that year *on the basis of the adopted regimen.* It follows, therefore, that by taking for any year the sum of the price of each commodity multiplied by its corresponding " mass-unit," a figure is obtained which represents the relative aggregate or total expenditure of the community in that year on all the commodities, etc., included. By computing these aggregate expenditures for a series of years and taking the expenditure in any selected year as " base," that is, making the expenditure in that year equal to 1,000 units, the relative expenditure in any other year, or what may be termed the " index-numbers," are readily ascertained. Numerical examples of the technique and methods adopted for the computation of index-numbers were given in Report No. 2 (pp. 44 and 45), and in Report No. 9 Appendixes I. to IV., pp. 174 to 229.

2. **Scope of Investigation.**—As noted in Report No. 1, distinction must be drawn between (*a*) Variations in the *purchasing-power* of money, and (*b*) Variations in the *standard of living*, and in Report No. 2 attention was directed to the factors which must be taken into consideration in dealing with these matters in order to arrive at a satisfactory aggregate expenditure. The various Reports deal with the list of commodities selected and the reasons for their adoption, while § 4 of this Chapter deals with the extension of the inquiry to cover all ordinary household expenditure.

3. Variations in Index-Numbers for Retail Prices and House Rents, Capital Cities, 1901 to 1925.—(i) *General.* In Labour Reports and Bulletins, and in recent issues of the Quarterly Summaries of Statistics, index-numbers were given for each of the four groups and for all groups combined for each capital city since 1901, the expenditure in 1911 being taken in each case as base (= 1,000). In this sub-section summarized results only are given, firstly, for food and groceries; secondly, for house rent; and thirdly, for the groups combined—the weighted average expenditure for all capital cities in 1911 being taken in each case as base (= 1,000). The index-numbers in each table are fully comparable with one another, since they show not only the variations from year to year in each capital, but also the relative cost as between the cities.

(ii) *Food and Groceries.* The index-numbers thus computed for the three groups comprising groceries and food are shown in the following table for 1907, 1911, and 1914, and for the last five years :—

RETAIL PRICE INDEX-NUMBERS, FOOD AND GROCERIES.—CAPITAL CITIES, 1907 TO 1925.

City.	1907.	1911.	1914.	1920.	1921.	1922.	1923.	1924.	1925.
Sydney	936	989	1,156	2,148	1,898	1,703	1,820	1,732	1,785
Melbourne	925	935	1,091	2,056	1,901	1,644	1,802	1,684	1,748
Brisbane	947	1,018	1,078	2,052	1,812	1,608	1,693	1,690	1,734
Adelaide	951	1,020	1,215	2,132	1,906	1,723	1,823	1,791	1,840
Perth	1,197	1,346	1,302	2,050	1,995	1,776	1,828	1,891	1,938
Hobart	1,010	1,058	1,212	2,162	2,025	1,794	1,863	1,849	1,810
Weighted Average (*a*) ..	955	**1,000**	1,144	2,101	1,902	1,684	1,805	1,732	1,785

(*a*) For all capital cities.

The figures quoted are directly comparable in every respect; thus, the same quantity of food and groceries, which cost £1,000 in the capital cities considered as a whole in 1911, would have cost £1,156 in Sydney in 1914, £1,346 in Perth in 1911, or £1,748 in Melbourne in 1925.

In 1925 increases were experienced in all the capitals with the exception of Hobart, which showed a decrease of 2.1 per cent. from the previous year. Comparing the results for 1925 with those for 1911, the extent by which prices increased varied from 87 per cent. in Melbourne to 44 per cent. in Perth. Prices, however, were abnormally high in Perth in 1911.

(iii) *Housing.* In previous issues of the Official Year Book the computations of index-numbers of housing accommodation were based upon the rentals of all houses from under 4 rooms to 8 rooms and over. In the following tables that basis has been altered, to accord with a resolution adopted by the Conference of Statisticians of Australia and New Zealand to the following effect: "that for purposes of computing price levels in respect of rent, it is desirable that houses of four and five rooms only be taken into account." This alteration will account for the difference between index-numbers given in the following tables and those given for the same tables in previous issues of the Year Book,

The following table gives index-numbers computed for the weighted average house rent of 4 and 5 roomed houses in each of the capital cities from 1907 to 1925, taking the average rent for the six capitals in 1911 as the base (=1,000). The average rent has been obtained for each city separately by multiplying the average predominant rent for each class of house (*i.e.*, wooden houses of 4 rooms and of 5 rooms and brick houses of 4 rooms and of 5 rooms) by a number ("weight") representing the relative number of houses of that class in the particular city. The sum of the products thus obtained divided by the sum of the weights, gives the weighted average for 4 and 5 roomed houses combined. The number of houses in each class for each city was obtained from the results of the 1911 census, and the index-numbers are based on the weighted average rents for 4 and 5 roomed houses combined, and do not refer to any particular class of house. The actual predominant rents for each class were given in appendixes to Labour Reports Nos, 1, 2, and 5 to 14, and an examination of these figures shows that for some classes of houses the increase has been greater, and in some less, than the general increase indicated in the following table.

INDEX-NUMBERS.—HOUSING, CAPITAL CITIES, 1907 TO 1925.

City.	1907.	1911.	1914.	1920.	1921.	1922.	1923.	1924.	1925.
Sydney	969	1,145	1,243	1,541	1,617	1,680	1,739	1,831	1,870
Melbourne	744	931	1,027	1,272	1,340	1,448	1,534	1,574	1,604
Brisbane	463	610	762	1,018	1,030	1,128	1,151	1,157	1,165
Adelaide	835	1,155	1,071	1,240	1,322	1,377	1,450	1,540	1,576
Perth	749	857	963	1,145	1,209	1,256	1,294	1,311	1,340
Hobart	661	739	847	1,420	1,441	1,359	1,503	1,592	1,649
Weighted Average (*a*) ..	813	**1,000**	1,082	1,344	1,410	1,486	1,553	1,615	1,647

(*a*) For all capital cities.

NOTE.—The above figures are directly comparable in every respect.

(iv) *Food, Groceries, and Housing* 4 *and* 5 *roomed Houses combined.* The weighted averages for all groups are of importance, as indicating the general results of this investigation so far as the purchasing-power of money is concerned. The following table shows the index-numbers for groceries, food, and house rent (4 and 5 roomed houses) for each capital city, the weighted average cost for the six capitals in 1911 being taken as base (=1,000):—

RETAIL PRICE INDEX-NUMBERS(*a*)—FOOD, GROCERIES, AND HOUSING.—CAPITAL CITIES, 1901 TO 1925.

City.	1907.	1911.	1914.	1920.	1921.	1922.	1923.	1924.	1925.
Sydney	948	1,048	1,188	1,920	1,793	1,694	1,790	1,769	1,817
Melbourne	857	934	1,067	1,762	1,690	1,571	1,702	1,643	1,694
Brisbane	765	865	959	1,664	1,519	1,427	1,490	1,490	1,521
Adelaide	908	1,070	1,161	1,797	1,687	1,593	1,683	1,697	1,741
Perth	1,029	1,162	1,175	1,710	1,700	1,581	1,627	1,673	1,714
Hobart	879	938	1,075	1,883	1,806	1,631	1,728	1,753	1,750
Weighted Average (*b*) ..	900	**1,000**	1,121	1,817	1,717	1,610	1,710	1,688	1,733

(*a*) As the price index-number increases, the purchasing-power of money diminishes.
(*b*) For all capital cities.

NOTE.—The above figures are directly comparable in every respect.

The combination of housing with prices of food and groceries has had the effect of considerably modifying the index of prices, or, in other words, the purchasing-power of money, as compared with the similar index based on food and groceries only. In 1920 there were increases in prices of food and groceries and housing, the combined results for 1920 being an increase of 62.1 per cent. over 1914, and 81.7 per cent. over 1911. The increase in the index-number between 1920 and 1914 varied between the capital cities from 46 per cent. in Perth to 75 per cent. in Hobart, while between 1920 and 1911 it varied between 47 per cent. in Perth and 101 per cent. in Hobart. The decrease in cost in 1921 was very slight in Perth compared with the decrease in the remaining cities. In 1922 there was a further decline in the combined cost of food, groceries, and housing in all the cities, the weighted average index-number being 1,610 as compared with 1,717 in 1921. The index-number for 1923 shows a rise of 6.2 per cent. on that for 1922, both food and groceries and housing contributing to the increase, that for 1924 shows a decrease of 1.3 per cent. from 1923, food and groceries having decreased 4 per cent., and housing increased 4 per cent., while that for 1925 discloses a rise of 2.7 per cent. over 1924, both food and groceries and housing again showing increases.

4. **Retail Price Index-Numbers in Terms of Currency.**—The tables in sub-section 3 give the relative cost in the six capital cities of food, groceries, and housing from 1907 to 1925 in the form of index-numbers. The figures have been converted into a monetary basis in the next table, and show the sums which would have to be paid in each city and in each year in order to purchase such relative quantities (indicated by the mass-units) of the several commodities, and to pay such sums for housing as would in the aggregate cost £1, according to the weighted average prices and rents in the six capitals in 1911.

RETAIL PRICES.—AMOUNTS NECESSARY ON THE AVERAGE IN EACH YEAR FROM 1907 TO 1926 (2nd QUARTER) TO PURCHASE IN EACH CAPITAL CITY WHAT WOULD COST ON THE AVERAGE £1 IN 1911 IN THE AUSTRALIAN CAPITALS REGARDED AS A WHOLE.

Year.	Sydney.	Melb'ne.	Brisbane.	Adelaide.	Perth.	Hobart.	Weighted Average of 6 Capital Cities.
FOOD AND GROCERIES (46 COMMODITIES).							
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1907	18 9	18 6	18 11	19 0	23 11	20 2	19 1
1911	19 9	18 8	20 4	20 5	26 11	21 2	**20 0**
1914	23 1	21 10	21 7	24 4	26 0	24 3	22 11
1920	43 0	41 1	41 1	42 8	41 0	43 3	42 0
1921	38 0	38 0	36 3	38 1	40 0	40 6	38 0
1922	34 1	32 11	32 2	34 6	35 6	35 11	33 8
1923	36 5	36 1	33 10	36 6	36 7	37 3	36 1
1924	34 8	33 8	33 10	35 10	37 10	37 0	34 8
1925	**35 8**	**35 0**	**34 8**	**36 10**	**38 9**	**36 2**	**35 8**
1925 1st Quarter ..	34 6	33 10	33 4	36 3	39 4	35 7	34 9
2nd ,, ..	35 3	34 11	34 6	37 9	40 5	35 10	35 8
3rd ,, ..	36 3	35 9	34 11	36 9	38 10	36 5	36 2
4th ,, ..	36 10	35 4	36 0	36 5	36 7	36 11	36 2
1926 1st ,, ..	36 9	35 0	35 6	37 3	37 1	37 7	36 2
2nd ,, ..	38 1	37 2	35 7	39 4	38 10	38 3	37 9
HOUSING ACCOMMODATION (WEIGHTED AVERAGE—4 AND 5 ROOMED HOUSES).							
1907	19 5	14 11	9 3	16 8	15 0	13 3	16 3
1911	22 11	18 7	12 2	23 1	17 2	14 9	**20 0**
1914	24 10	20 6	15 3	21 5	19 3	16 11	20 8
1920	30 10	25 5	20 4	24 10	22 11	28 5	26 11
1921	32 4	26 10	20 7	26 5	24 2	28 10	28 2
1922	33 7	28 10	22 7	27 6	25 1	27 2	28 9
1923	34 9	30 8	23 0	29 0	25 11	30 1	31 1
1924	36 7	31 6	23 2	30 10	26 3	31 10	32 4
1925	**37 5**	**32 1**	**23 4**	**31 6**	**26 10**	**33 0**	**32 11**
1925 1st Quarter ..	37 5	31 11	23 3	31 4	26 8	34 11	32 11
2nd ,, ..	37 5	32 0	23 3	31 7	26 8	34 4	32 11
3rd ,, ..	37 0	32 4	23 4	31 7	27 0	31 6	32 11
4th ,, ..	37 10	32 0	23 4	31 6	26 9	31 1	33 1
1926 1st ,, ..	36 5	33 7	26 8	30 7	29 3	32 6	33 5
2nd ,, ..	36 7	34 0	26 8	30 7	29 5	31 11	33 7
FOOD, GROCERIES, AND HOUSING (4 AND 5 ROOMS ONLY) COMBINED.							
1907	18 11	16 2	15 4	18 2	20 7	17 7	18 0
1911	21 0	18 8	17 4	21 5	23 3	18 9	**20 0**
1914	23 9	21 4	19 2	23 3	23 6	21 6	22 5
1920	38 5	35 3	33 3	35 11	34 2	37 8	36 4
1921	35 10	33 10	30 5	33 9	34 0	36 1	34 4
1922	33 10	31 5	28 6	31 10	31 7	32 7	32 2
1923	35 10	34 0	29 10	33 8	32 6	34 7	34 2
1924	35 5	32 10	29 10	33 11	33 6	35 1	33 9
1925	**36 4**	**33 11**	**30 5**	**34 10**	**34 3**	**35 0**	**34 8**
1925 1st Quarter ..	35 7	33 1	29 7	34 5	34 7	35 5	34 0
2nd ,, ..	36 0	33 10	30 4	35 6	35 3	35 3	34 8
3rd ,, ..	36 7	34 6	30 6	34 10	34 5	34 7	34 11
4th ,, ..	37 2	34 1	31 3	34 7	32 11	34 9	35 0
1926 1st ,, ..	36 7	34 6	32 2	34 9	34 1	35 8	35 1
2nd ,, ..	37 6	36 0	32 2	36 1	35 3	35 10	36 2

5. Variations in Index-Numbers, Retail Prices and Housing, Thirty Australian Towns, 1925.—The index-numbers given in the preceding sub-sections show changes in the cost of food, groceries, and housing separately for each capital city during the years 1907 to 1925. The figures given in the next table show the relative cost of food and groceries, and of housing for the years 1923 to 1925 in the thirty towns for which particulars are now collected. The weighted aggregate expenditure for the six capitals for the year 1911 has been taken as base and made equal to 1,000, hence the columns are comparable both horizontally and vertically. The index-numbers in the last column are the same as in previous tables where the period and town are comparable.

INDEX-NUMBERS, THIRTY TOWNS, SHOWING RELATIVE EXPENDITURE ON FOOD AND GROCERIES AND ON HOUSING (4 AND 5 ROOMS) SEPARATELY, AND ON THESE ITEMS COMBINED. BASIS OF TABLE = WEIGHTED AVERAGE EXPENDITURE ON FOOD, GROCERIES, AND HOUSING (4 AND 5 ROOMS) IN THE SIX CAPITAL CITIES IN 1911 = 1,000.

Town.	1923.			1924.			1925.		
	Food and Groceries.	Housing.	Food, Groceries, and Housing.	Food and Groceries.	Housing.	Food, Groceries, and Housing.	Food and Groceries.	Housing.	Food, Groceries, and Housing.
New South Wales—									
Sydney	1,137	653	1,790	1,082	687	1,769	1,115	702	1,817
Newcastle	1,148	539	1,687	1,092	571	1,663	1,125	621	1,746
Broken Hill	1,248	332	1,580	1,221	349	1,570	1,315	376	1,691
Goulburn	1,158	578	1,736	1,104	659	1,763	1,115	634	1,749
Bathurst	1,103	392	1,495	1,028	472	1,500	1,074	516	1,590
Weighted Average	1,141	632	1,773	1,086	667	1,753	1,120	685	1,805
Victoria—									
Melbourne	1,126	576	1,702	1,052	591	1,643	1,092	602	1,694
Ballarat	1,120	342	1,462	1,064	361	1,425	1,101	388	1,489
Bendigo	1,121	374	1,495	1,080	370	1,450	1,111	409	1,520
Geelong	1,097	474	1,571	1,045	475	1,520	1,081	496	1,577
Warrnambool	1,093	452	1,545	1,076	461	1,537	1,074	459	1,533
Weighted Average	1,124	554	1,678	1,053	569	1,622	1,092	581	1,673
Queensland—									
Brisbane	1,057	433	1,490	1,055	435	1,490	1,083	438	1,521
Toowoomba	1,048	369	1,418	1,000	388	1,388	1,045	428	1,473
Rockhampton	1,085	291	1,376	1,049	300	1,349	1,092	386	1,478
Charters Towers	1,140	335	1,475	1,150	342	1,492	1,171	346	1,517
Warwick	1,048	368	1,416	1,014	413	1,427	1,042	408	1,450
Weighted Average	1,062	410	1,472	1,053	415	1,468	1,083	428	1,511
South Australia—									
Adelaide	1,138	545	1,683	1,119	578	1,697	1,149	592	1,741
Kadina, &c.	1,109	400	1,509	1,097	372	1,469	1,158	326	1,484
Port Pirie	1,130	372	1,502	1,137	377	1,514	1,208	394	1,602
Mount Gambier	1,095	302	1,397	1,057	304	1,361	1,095	308	1,403
Peterborough	1,124	379	1,503	1,135	460	1,595	1,211	477	1,688
Weighted Average	1,136	528	1,664	1,117	558	1,675	1,152	568	1,720
Western Australia—									
Perth, &c.	1,141	486	1,627	1,181	492	1,673	1,210	504	1,714
Kalgoorlie, &c.	1,312	354	1,666	1,325	345	1,670	1,339	337	1,676
Northam	1,225	421	1,646	1,197	499	1,696	1,257	528	1,785
Bunbury	1,149	433	1,582	1,212	434	1,646	1,255	438	1,693
Geraldton	1,198	507	1,705	1,239	507	1,746	1,284	525	1,809
Weighted Average	1,162	470	1,632	1,198	476	1,674	1,228	485	1,713
Tasmania—									
Hobart	1,164	564	1,728	1,155	598	1,753	1,131	619	1,750
Launceston	1,136	469	1,605	1,147	478	1,625	1,121	495	1,616
Burnie	1,176	476	1,652	1,173	489	1,662	1,137	503	1,640
Devonport	1,159	460	1,619	1,163	480	1,643	1,155	468	1,623
Queenstown	1,220	304	1,524	1,259	305	1,564	1,278	304	1,582
Weighted Average	1,158	520	1,678	1,157	544	1,701	1,135	561	1,696
Weighted Average for 30 Towns	1,129	560	1,689	1,085	583	1,668	1,118	597	1,715
Weighted Average 6 Capital Cities	**1,127**	**583**	**1,710**	**1,082**	**606**	**1,688**	**1,114**	**619**	**1,733**

§ 3. Retail Price Index-Numbers, 200 Towns.

1. **General.**—To supplement the information collected each month for the 30 towns specified in the preceding paragraph, a special investigation was initiated in November, 1913, into retail price index-numbers in 70 additional towns. This investigation was repeated in November, 1914, and again in November, 1915, when the number of additional towns was increased to 120. In November, 1923, the number of additional towns was further increased to 170, and it is intended to institute inquiries in November in each year, thus making information available annually for 200 towns. The results of the first investigation were published in Labour Bulletin No. 5 (Section IV., pages 26

to 33), where some description was given of the methods adopted in making the investigation and in computing the index-numbers. The results of the succeeding yearly investigations have appeared in the Labour Bulletins and Reports of this Bureau.

2. **Detailed Results, 1923 to 1925.**—The results of the investigation made in November, 1925, are set out in the following tables. The aggregate expenditure on food and groceries separately is shown in the form of index-numbers for each year in column A. In columns B and C the corresponding aggregate expenditure on food, groceries, and rent of 4 rooms, and food, groceries, and rent of 5 rooms are shown for each year for each individual town. The index-number 1,675 represents the weighted average expenditure in 200 towns on food, groceries, and rent of 5-roomed houses ; 1,549 represents the average weighted expenditure on food, groceries, and rent of four roomed houses in November, 1925. Similarly, in column A, the index-number 1,077 represents the relative weighted average expenditure on food and groceries only for November, 1925. The figures given in the table are comparable throughout. Thus, taking the average weighted expenditure for all 200 towns on food, groceries, and rent of 5-roomed houses as equal to 1,675, the expenditure on the same items in Melbourne is 1,691, while if 4-roomed houses were substituted for 5-roomed the expenditure in Melbourne would be represented by 1,556.

A change has been made in the basis on which the index-numbers in this table are computed. Previously, the weighted average expenditure on food, groceries, and rent of 5-roomed houses for the 150 towns in each year was taken as base. In the tables on the following pages the same basis is taken as in the case of the tables referring to 30 towns and six capital cities given in the preceding section, *i.e.* the weighted average expenditure on food, groceries, and housing accommodation in the six capital cities in 1911 is made equal to 1,000.

INDEX-NUMBERS.—COST OF FOOD, GROCERIES, AND HOUSING IN 200 TOWNS IN 1923, 1924, AND 1925, COMPARED WITH THE WEIGHTED AVERAGE COST OF FOOD, GROCERIES, AND RENT FOR ALL HOUSES IN THE SIX CAPITAL CITIES IN 1911 AS BASE (=1,000).

State and Town.	1923. November.			1924. November.			1925. November.		
	Food and Groceries only. A	Food, Groceries, and Rent of 4-Roomed Houses. B	Food, Groceries, and Rent of 5-Roomed Houses. C	Food and Groceries only. A	Food, Groceries, and Rent of 4-Roomed Houses. B	Food, Groceries, and Rent of 5-Roomed Houses. C	Food and Groceries only. A	Food, Groceries, and Rent of 4-Roomed Houses. B	Food, Groceries, and Rent of 5-Roomed Houses. C
NEW SOUTH WALES—									
Sydney	1,087	1,608	1,705	1,022	1,559	1,690	1,072	1,623	1,759
Newcastle	1,120	1,531	1,676	1,006	1,447	1,599	1,090	1,603	1,733
Broken Hill	1,227	1,510	1,587	1,145	1,467	1,525	1,244	1,570	1,648
Goulburn	1,095	1,570	1,661	1,020	1,521	1,694	1,086	1,607	1,695
Bathurst	1,045	1,325	1,414	941	1,264	1,376	1,043	1,418	1,488
Albury	1,060	1,636	1,754	990	1,648	1,785	1,082	1,812	1,954
Armidale	1,073	1,424	1,536	986	1,371	1,469	1,095	1,464	1,674
Ballina	1,169	1,511	1,564	1,052	1,546	1,678	1,175	1,644	1,742
Bega	1,132	1,408	1,530	1,029	1,322	1,437	1,114	1,432	1,561
Berry	1,117	1,413	1,512	1,068	1,331	1,496	1,151	1,464	1,595
Blackheath	1,199	1,633	1,725	1,130	1,623	1,738	1,203	1,677	1,779
Bourke	1,228	1,426	1,505	1,055	1,266	1,292	1,201	1,382	1,474
Bowral	1,141	1,701	1,760	1,060	1,530	1,672	1,118	1,684	1,790
Casino	1,133	1,541	1,643	1,063	1,490	1,611	1,157	1,617	1,708
Cessnock	1,111	1,576	1,659	1,014	1,529	1,683	1,094	1,664	1,774
Cobar	1,152	1,251	1,284	1,073	1,162	1,208	1,156	1,245	1,291
Cooma	1,220	1,611	1,709	1,083	1,425	1,537	1,131	1,474	1,615
Coonamble	1,142	1,405	1,475	1,077	1,406	1,472	1,143	1,459	1,569
Cootamundra	1,098	1,558	1,690	976	1,447	1,549	1,160	1,669	1,807
Corrimal	1,106	1,435	1,527	975	1,304	1,370	1,077	1,471	1,498
Cowra	1,074	1,505	1,599	1,017	1,438	1,511	1,102	1,536	1,668
Cronulla	1,155	1,748	1,879	1,071	1,713	1,845	1,099	1,740	1,878
Cudgegong	1,167	1,364	1,463	1,053	1,289	1,355	(*a*)	(*a*)	(*a*)
Deniliquin	1,087	1,405	1,474	1,009	1,336	1,429	1,078	1,412	1,529
Dubbo	1,204	1,657	1,791	1,065	1,537	1,641	1,141	1,630	1,741
Forbes	1,105	1,559	1,737	1,000	1,491	1,651	1,098	1,609	1,756

(*a*) Figures not available.

INDEX-NUMBERS.—COST OF FOOD, GROCERIES, AND HOUSING IN 200 TOWNS, ETC.—*continued.*

State and Town.	1923. November.			1924. November.			1925. November.		
	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.
	A	B	C	A	B	C	A	B	C
NEW SOUTH WALES—*continued.*									
Gilgandra	1,136	1,426	1,505	1,016	1,268	1,321	1,146	1,398	1,556
Glen Innes	1,015	1,326	1,423	925	1,254	1,401	1,000	1,337	1,505
Grafton	1,149	1,544	1,643	1,035	1,324	1,430	1,093	1,611	1,734
Grenfell	1,179	1,541	1,771	1,038	1,498	1,630	1,120	1,571	1,696
Griffiths	1,214	1,872	2,004	1,006	1,796	1,862	1,166	1,877	2,186
Gulgong	1,092	1,388	1,451	995	1,291	1,354	1,093	1,297	1,350
Gunnedah	1,039	1,434	1,566	962	1,333	1,439	1,051	1,437	1,545
Hay	(*a*)	(*a*)	(*a*)	1,085	1,392	1,531	1,175	1,513	1,683
Inverell	1,102	1,452	1,521	1,011	1,373	1,451	1,103	1,513	1,607
Junee	1,117	1,561	1,676	972	1,564	1,696	1,068	1,699	1,788
Katoomba	1,205	1,728	1,859	1,129	1,619	1,737	1,147	1,663	1,779
Kempsey	1,021	1,350	1,383	1,004	1,398	1,484	1,046	1,472	1,547
Kiama	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)	1,145	1,492	1,651
Kurri Kurri	1,181	1,477	1,550	1,068	1,424	1,496	1,148	1,576	1,658
Leeton	1,196	1,914	1,949	1,097	1,867	1,886	1,172	1,896	1,932
Lismore	1,162	1,517	1,678	1,049	1,404	1,566	1,088	1,490	1,680
Lithgow	1,166	1,547	1,655	1,023	1,422	1,502	1,087	1,489	1,581
Maitland	1,086	1,554	1,596	952	1,409	1,491	1,078	1,578	1,700
Moree	1,288	1,692	1,797	1,104	1,556	1,692	1,183	1,657	1,782
Moss Vale	1,112	1,622	1,704	1,034	1,516	1,670	1,121	1,648	1,779
Mudgee	1,115	1,515	1,611	982	1,398	1,485	1,086	1,503	1,601
Narrabri	1,109	1,427	1,563	960	1,309	1,436	1,096	1,403	1,518
Narrandera	1,187	1,621	1,746	1,069	1,516	1,694	1,164	1,592	1,727
Nowra	1,164	1,559	1,717	1,036	1,481	1,595	1,105	1,553	1,681
Orange	1,032	1,432	1,535	992	1,447	1,565	1,057	1,476	1,561
Parkes	1,120	1,604	1,696	1,020	1,480	1,595	1,110	1,586	1,693
Penrith	1,083	1,440	1,557	1,025	1,340	1,436	1,090	1,491	1,666
Port Kembla	1,145	1,467	1,540	1,057	1,380	1,450	1,120	1,442	1,537
Portland	1,106	1,402	1,494	1,042	1,423	1,535	1,122	1,583	1,623
Queanbeyan	1,172	1,577	1,676	1,057	1,551	1,704	1,136	1,682	1,815
Quirindi	1,128	1,437	1,562	1,034	1,350	1,507	1,134	1,446	1,647
Richmond	1,121	1,492	1,588	1,075	1,493	1,569	1,135	1,547	1,645
Scone	1,028	1,462	1,587	965	1,335	1,491	1,058	1,475	1,607
Singleton	1,117	1,479	1,548	988	1,353	1,442	1,080	1,445	1,534
Tamworth	1,065	1,427	1,582	947	1,380	1,465	1,047	1,519	1,610
Taree	1,088	1,598	1,687	979	1,538	1,686	1,076	1,586	1,750
Temora	1,099	1,555	1,667	1,057	1,584	1,692	1,160	1,703	1,861
Tenterfield	1,137	1,499	1,565	1,010	1,383	1,436	1,079	1,473	1,546
Tumut	1,149	1,511	1,643	1,039	1,533	1,632	1,158	1,619	1,783
Ulmarra	1,163	1,571	1,623	1,075	1,470	1,602	1,101	1,549	1,601
Wagga Wagga ..	1,132	1,856	1,988	1,016	1,740	1,838	1,068	1,776	1,989
Walcha	1,009	1,305	1,436	994	1,257	1,405	1,111	1,471	1,572
Wellington	1,129	1,414	1,506	1,018	1,308	1,421	1,109	1,404	1,486
Weston	1,198	1,487	1,527	1,066	1,356	1,395	1,155	1,519	1,583
Windsor	1,108	1,483	1,634	1,052	1,488	1,562	1,143	1,554	1,653
Wollongong	1,137	1,560	1,652	1,045	1,508	1,595	1,092	1,599	1,678
Wyalong	1,148	1,595	1,681	1,099	1,494	1,626	1,125	1,520	1,619
Yass	1,249	1,567	1,648	1,080	1,458	1,524	1,211	1,658	1,737
Young	1,014	1,412	1,511	942	1,376	1,475	1,085	1,671	1,727
Weighted Average for State	1,099	1,585	1,686	1,023	1,527	1,653	1,083	1,607	1,737
VICTORIA—									
Melbourne	1,062	1,547	1,689	963	1,455	1,600	1,053	1,556	1,691
Ballarat	1,080	1,356	1,463	987	1,268	1,384	1,066	1,366	1,506
Bendigo	1,075	1,375	1,473	988	1,293	1,373	1,070	1,403	1,524
Geelong	1,054	1,427	1,556	945	1,318	1,448	1,049	1,475	1,590
Warrnambool	1,067	1,448	1,578	987	1,370	1,497	1,040	1,424	1,545
Ararat	1,150	1,472	1,540	1,049	1,372	1,455	1,174	1,518	1,613
Bacchus Marsh ..	1,081	1,489	1,640	961	1,389	1,520	1,050	1,498	1,642
Bairnsdale	1,166	1,528	1,692	1,052	1,414	1,578	1,151	1,545	1,677
Beechworth	1,114	1,364	1,433	1,040	1,303	1,369	1,116	1,373	1,440
Benalla	1,081	1,413	1,489	993	1,325	1,421	1,086	1,448	1,560
Camperdown	1,055	1,450	1,581	1,001	1,404	1,527	1,098	1,515	1,647
Casterton	1,073	1,345	1,446	1,013	1,300	1,425	1,111	1,424	1,517
Castlemaine	1,069	1,358	1,454	1,056	1,389	1,505	1,111	1,427	1,550
Colac	1,135	1,675	1,793	1,042	1,574	1,667	1,070	1,591	1,728
Creswick	1,035	1,154	1,206	962	1,107	1,126	1,072	1,230	1,289
Daylesford	1,080	1,376	1,458	986	1,216	1,282	1,064	1,327	1,426
Dunolly	1,067	1,212	1,238	996	1,147	1,180	1,056	1,214	1,267

(*a*) Figures not available.

INDEX-NUMBERS.—COST OF FOOD, GROCERIES, AND HOUSING IN 200 TOWNS, ETC.—*continued.*

State and Town.	1923. November.			1924. November.			1925. November.		
	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.
	A	B	C	A	B	C	A	B	C
VICTORIA—*continued.*									
Echuca	1,069	1,364	1,464	1,026	1,355	1,470	1,116	1,438	1,570
Euroa	1,131	1,414	1,476	1,070	1,389	1,465	1,143	1,479	1,604
Hamilton	1,140	1,557	1,667	1,086	1,590	1,744	1,141	1,623	1,744
Healesville	1,147	1,588	1,700	1,016	1,430	1,542	1,075	1,469	1,568
Horsham	1,103	1,673	1,827	1,065	1,668	1,865	1,117	1,732	1,907
Kerang	1,126	1,652	1,784	1,061	1,620	1,752	1,118	1,688	1,797
Koroit	1,096	1,372	1,458	988	1,251	1,357	1,075	1,345	1,404
Korumburra	1,124	1,387	1,519	1,037	1,497	1,629	1,084	1,545	1,660
Kyneton	1,064	1,380	1,459	980	1,316	1,410	1,062	1,397	1,532
Lilydale	1,127	1,555	1,653	1,012	1,440	1,572	1,138	1,582	1,747
Maffra	1,146	1,738	1,870	1,019	1,622	1,732	1,023	1,615	1,747
Maldon	1,086	1,242	1,279	1,000	1,158	1,206	1,061	1,214	1,278
Maryborough	1,108	1,315	1,407	1,000	1,214	1,309	1,104	1,337	1,456
Mildura	1,163	1,769	1,920	1,084	1,693	1,805	1,152	1,784	1,926
Morwell	1,108	1,733	1,832	1,041	1,764	1,830	1,129	1,700	1,853
Nhill	1,149	1,518	1,639	1,124	1,550	1,699	1,174	1,700	1,832
Orbost	1,104	1,433	1,499	1,047	1,442	1,573	1,127	1,522	1,785
Portland	1,097	1,412	1,525	1,067	1,357	1,498	1,187	1,525	1,680
Port Fairy	1,090	1,358	1,424	1,016	1,292	1,352	1,096	1,391	1,458
St. Arnaud	1,122	1,451	1,591	1,040	1,435	1,514	1,193	1,632	1,752
Sale	1,072	1,487	1,643	987	1,432	1,582	1,074	1,537	1,677
Seymour	1,090	1,370	1,462	1,062	1,400	1,490	1,145	1,476	1,555
Shepparton	1,092	1,487	1,566	1,007	1,476	1,590	1,080	1,633	1,760
Stawell	1,180	1,452	1,548	1,087	1,372	1,451	1,179	1,500	1,595
Swan Hill	1,086	1,612	1,777	1,052	1,710	1,809	1,098	1,690	1,822
Terang	1,105	1,447	1,552	1,041	1,449	1,567	1,125	1,546	1,651
Traralgon	1,067	1,426	1,518	1,024	1,386	1,485	1,115	1,461	1,612
Wangaratta	1,166	1,618	1,686	1,061	1,458	1,563	1,149	1,590	1,720
Warracknabeal ..	1,065	1,512	1,634	1,020	1,536	1,645	1,131	1,657	1,745
Warragul	1,099	1,595	1,735	969	1,429	1,561	1,080	1,551	1,716
Wonthaggi	1,204	1,674	1,761	1,049	1,474	1,566	1,145	1,623	1,693
Weighted Average for State	1,069	1,525	1,660	973	1,437	1,574	1,062	1,539	1,671
QUEENSLAND—									
Brisbane	1,039	1,376	1,487	970	1,303	1,423	1,068	1,405	1,523
Toowoomba	1,049	1,339	1,423	905	1,223	1,324	1,051	1,359	1,505
Rockhampton	1,085	1,329	1,375	972	1,211	1,278	1,075	1,372	1,474
Charters Towers ..	1,132	1,390	1,474	1,065	1,322	1,411	1,156	1,422	1,510
Warwick	1,023	1,296	1,404	931	1,291	1,352	1,039	1,377	1,450
Ayr	1,195	1,611	1,732	1,125	1,546	1,691	1,224	1,685	1,849
Barcaldine	1,237	1,582	1,681	1,116	1,477	1,609	1,184	1,579	1,727
Bowen	1,103	1,498	1,597	1,079	1,507	1,655	1,184	1,579	1,645
Bundaberg	959	1,211	1,293	947	1,232	1,327	1,044	1,364	1,439
Cairns	1,163	1,602	1,738	1,139	1,596	1,710	1,238	1,786	1,913
Charleville	1,145	1,573	1,671	1,077	1,537	1,702	1,183	1,571	1,676
Chillagoe	1,138	1,467	1,533	1,063	1,326	1,392	1,277	1,513	1,540
Cloncurry	1,174	1,510	1,653	1,178	1,540	1,636	1,212	1,592	1,708
Cooktown	(*a*)	(*a*)	(*a*)	1,072	1,173	1,221	1,141	1,273	1,330
Cunnamulla	1,155	1,484	1,550	1,074	1,403	1,468	1,186	1,515	1,581
Dalby	1,031	1,268	1,321	981	1,310	1,375	1,051	1,412	1,495
Gayndah	1,031	1,360	1,426	952	1,245	1,310	1,093	1,383	1,455
Gladstone	1,040	1,303	1,435	1,020	1,283	1,415	1,109	1,385	1,437
Goondiwindi	1,145	1,428	1,540	1,033	1,362	1,471	1,139	1,554	1,643
Gympie	1,054	1,305	1,405	990	1,286	1,352	1,087	1,399	1,493
Hughenden	1,194	1,638	1,770	1,101	1,583	1,682	1,197	1,734	1,866
Innisfail	1,309	1,814	1,923	1,211	1,649	1,803	1,316	1,842	1,974
Ipswich	1,063	1,406	1,458	963	1,246	1,331	1,044	1,373	1,439
Longreach	1,221	1,552	1,647	1,073	1,446	1,591	1,177	1,561	1,646
Mackay	1,066	1,448	1,571	987	1,407	1,511	1,087	1,536	1,671
Maryborough	998	1,251	1,353	953	1,233	1,351	1,051	1,347	1,449
Mount Morgan.. ..	1,127	1,357	1,384	1,023	1,300	1,346	1,071	1,282	1,321
Nambour	1,054	1,400	1,498	994	1,410	1,498	1,085	1,458	1,541
Roma	1,132	1,484	1,534	1,010	1,326	1,434	1,109	1,468	1,545
Stanthorpe	1,134	1,503	1,575	1,075	1,431	1,503	1,153	1,548	1,614
Townsville	1,149	1,603	1,731	1,085	1,569	1,719	1,176	1,655	1,797
Winton	1,235	1,735	1,834	1,108	1,656	1,722	1,199	1,802	1,912
Weighted Average for State	1,063	1,393	1,492	987	1,320	1,430	1,085	1,430	1,540

(*a*) Figures not available.

INDEX-NUMBERS.—COST OF FOOD, GROCERIES, AND HOUSING IN 200 TOWNS, ETC.—*continued.*

State and Town.	1923. November.			1924. November.			1925. November.		
	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.
	A	B	C	A	B	C	A	B	C
SOUTH AUSTRALIA—									
Adelaide	1,072	1,518	1,667	1,020	1,516	1,645	1,067	1,567	1,688
Kadina, etc.	1,059	1,334	1,435	1,014	1,281	1,373	1,110	1,369	1,450
Port Pirie	1,110	1,433	1,530	1,060	1,399	1,479	1,154	1,500	1,596
Mount Gambier ..	1,051	1,286	1,354	994	1,233	1,316	1,040	1,266	1,362
Peterborough	1,079	1,395	1,470	1,103	1,502	1,584	1,116	1,520	1,596
Freeling	1,006	1,269	1,375	1,083	1,379	1,445	1,105	1,473	1,539
Gawler	1,014	1,326	1,400	1,016	1,398	1,457	1,050	1,386	1,458
Kapunda	1,041	1,304	1,403	1,004	1,215	1,327	1,073	1,284	1,349
Koringa	1,110	1,505	1,571	1,053	1,448	1,514	1,101	1,298	1,386
Millicent	1,099	1,428	1,520	966	1,427	1,440	986	1,299	1,388
Murray Bridge	1,079	1,524	1,623	1,023	1,474	1,582	1,070	1,491	1,543
Port Augusta	1,112	1,437	1,540	1,123	1,448	1,551	1,209	1,565	1,648
Quorn	1,065	1,529	1,651	1,028	1,518	1,620	1,100	1,536	1,643
Victor Harbour ..	1,031	1,580	1,711	1,050	1,642	1,774	1,102	1,635	1,777
Renmark	1,166	1,640	1,759	1,116	1,613	1,749	1,231	1,708	1,840
Weighted Average for State	1,073	1,498	1,639	1,024	1,494	1,616	1,074	1,545	1,661
WESTERN AUSTRALIA—									
Perth and Fremantle ..	1,046	1,446	1,538	1,114	1,527	1,618	1,065	1,476	1,569
Kalgoorlie and Boulder ..	1,233	1,580	1,645	1,258	1,590	1,651	1,235	1,556	1,611
Northam	1,154	1,510	1,610	1,074	1,496	1,612	1,161	1,556	1,732
Bunbury	1,056	1,420	1,525	1,137	1,507	1,601	1,134	1,504	1,598
Geraldton	1,131	1,570	1,654	1,192	1,632	1,704	1,172	1,619	1,751
Albany	1,172	1,468	1,567	1,204	1,498	1,609	1,230	1,532	1,626
Beverley	1,072	1,281	1,360	1,132	1,366	1,423	1,119	1,384	1,472
Bridgetown	1,149	1,560	1,626	1,193	1,538	1,604	1,232	1,643	1,709
Broome	1,306	1,964	2,030	1,330	1,988	2,053	1,322	1,980	2,045
Carnarvon	1,249	1,743	1,841	1,184	1,710	1,776	1,329	1,823	1,921
Collie	1,105	1,467	1,533	1,172	1,567	1,632	1,236	1,598	1,664
Greenbushes	1,193	1,378	1,404	1,242	1,440	1,466	1,251	1,435	1,474
Katanning	1,009	1,404	1,467	1,077	1,459	1,577	1,089	1,473	1,553
Leonora and Gwalia ..	1,355	1,513	1,552	1,399	1,557	1,597	1,354	1,512	1,551
Meekatharra	1,162	1,425	1,491	1,364	1,627	1,693	1,430	1,693	1,759
Narrogin	1,136	1,636	1,794	1,154	1,628	1,812	1,160	1,643	1,792
Wagin	1,104	1,338	1,453	1,185	1,491	1,537	1,144	1,467	1,575
York	1,125	1,487	1,540	1,176	1,522	1,574	1,213	1,558	1,637
Weighted Average for State	1,078	1,466	1,555	1,138	1,536	1,624	1,103	1,499	1,590
TASMANIA—									
Hobart	1,114	1,574	1,762	1,051	1,579	1,724	1,077	1,554	1,718
Launceston	1,112	1,490	1,657	1,057	1,444	1,610	1,064	1,459	1,619
Burnie	1,176	1,583	1,746	1,042	1,485	1,621	1,110	1,575	1,689
Devonport	1,146	1,566	1,683	1,080	1,524	1,641	1,098	1,501	1,651
Queenstown	1,214	1,478	1,556	1,185	1,448	1,527	1,225	1,488	1,567
Beaconsfield	1,113	1,205	1,225	1,099	1,218	1,257	1,069	1,174	1,201
Campbelltown	1,052	1,260	1,308	1,045	1,259	1,333	1,094	1,298	1,349
Deloraine	1,019	1,197	1,457	1,014	1,363	1,396	1,023	1,352	1,418
Franklin	1,082	1,314	1,351	1,061	1,298	1,325	1,063	1,300	1,326
New Norfolk	1,043	1,372	1,465	1,032	1,361	1,460	1,057	1,393	1,449
Scottsdale	1,129	1,392	1,458	1,039	1,336	1,418	1,060	1,367	1,429
Ulverstone	1,128	1,450	1,558	1,030	1,380	1,477	1,082	1,411	1,510
Zeehan	1,251	1,415	1,468	1,154	1,364	1,430	1,256	1,454	1,519
Weighted Average for State	1,120	1,526	1,689	1,059	1,509	1,647	1,083	1,506	1,652
Weighted Average for Australia	1,083	1,526	1,642	1,012	1,472	1,597	1,077	1,549	1,675

By deducting the index-number in column A from those in column B and C, the relative aggregate expenditure on housing accommodation can be ascertained. Thus, for November, 1925, the index-number for food and groceries in Melbourne (column A) is 1053. Subtracting this from 1,556 (column B) gives a difference of 503, which is the relative cost of house rent for houses of 4 rooms, and from 1,691 (column C) gives a difference of 638, which is the relative cost of house rent for houses of 5 rooms.

Similarly the relative cost of housing accommodation can be ascertained for each of the towns included.

A table showing the retail price index-numbers (food and groceries) for each of the thirty towns for various months since July, 1914, appeared in previous issues, but considerations of space preclude its repetition in the present issue. This table is however, given in Labour Report No. 14, issued by this Bureau.

§ 4. Variations in the Cost of Food, Groceries, Rent, Clothing, and Miscellaneous Expenditure.

1. **General.**—The index-numbers in §3 show the variations in the cost of food, groceries and house rent. The expenditure on these items covers approximately 60 per cent. of the total expenditure of the ordinary household. The balance is expended on clothing, boots, fuel, light, and such miscellaneous items as renewals of furniture, furnishings, drapery, crockery, lodge dues, trade union dues, recreation, newspapers, etc. The Royal Commission on the Basic Wage recommended in its report that a method should be adopted of ascertaining from time to time the rise and fall in the purchasing-power of money in its relation to the total household expenditure. The Government adopted the recommendation, and the duty of carrying out the necessary investigations was entrusted to the Bureau of Census and Statistics, which adopted the methods hereunder described.

2. **Methods Adopted.**—The Commission was concerned principally with the ascertainment of variations in the cost of the regimen described in the Indicator Lists published in its Report. It is clear, however, that restriction of the investigations of the Bureau of Census and Statistics in the way suggested by the Commission, would have limited their usefulness. It was decided, therefore, to apply to the extended investigation the method of index-numbers already used in the investigations into variations in the cost of food, groceries, and rent. The index-numbers may be used to determine accurately from time to time the rise and fall in the purchasing-power of money in relation to the reasonable standard of comfort for the typical family as outlined by the Commission, as well as for the determination of variations in any standard fixed by previous investigators, or which may be fixed in the future.

After careful investigation it was decided to adopt for food, groceries, and house rent, the commodities, method, and weighting used by this Bureau. The commodities and quantities adopted for food and groceries conform very closely to those given in the Indicator Lists of the Commission. With regard to rent, the Commission adopted a certain type of five-roomed house as its standard for determining the amount allowed for housing. The investigations made by this Bureau were not confined to any particular type, but to the predominant house rent, and can with safety be used to show variations in the rent being paid for the type of house described by the Commission.

The investigations of this Bureau advisedly had been confined to food, groceries, and house rent,* and it was necessary, therefore, to make investigations into the cost of clothing and miscellaneous expenditure. With regard to clothing, the Basic Wage Commission collected a large amount of information as to prices and life of articles, and this has been utilized in computing the index-numbers given in the following tables. Forms were sent out to retailers on which the prices of the articles at November, 1920, were given. These prices, so far as the capital cities are concerned (being in general the prices quoted by the firms to whom the forms were sent), are the predominant prices, i.e., the price of the grade of the articles which is most in demand. The retailers were asked to quote for November, 1921, and for May, 1922, the prices of the same articles. In order to ascertain the change in expenditure, the quantities and life as given in the Indicator Lists of the Basic Wage Commission were used for "weighting" purposes to arrive at a weekly expenditure for clothing. This weekly expenditure is then multiplied by weights in the same manner as is the weekly expenditure on rent, thus giving an aggregate expenditure comparable with the aggregate expenditure on food and groceries and on rent.

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* See pages 22–25 of Labour Report No. 12.

With regard to Miscellaneous Expenditure, which covers a very wide field, inquiries were made as to variations in cost of fuel and light, household utensils, drapery, crockery, etc., and also with regard to other items included in the Indicator Lists for Miscellaneous Expenditure, and the aggregate expenditure on these items has been computed in the same manner as that for clothing.

The item Groceries (not Food) has been omitted from Miscellaneous Expenditure, as the index-numbers of this Bureau cover the items allowed for, such as soap, starch, blue, etc.

3. **Period Selected as Base.**—For the new index-numbers November, 1914, was adopted as base owing to the difficulty of securing information with regard to prices of clothing and miscellaneous items for earlier years, but they may be accepted as typical of immediate pre-war conditions.

4. **Variations in Cost in the Capital Cities.***—The index-numbers in the following table show the variations not only in each city from period to period, but also as between the various cities at any given period. Thus, the increase in cost in the six capital cities from November, 1914, was greatest in November, 1920, when it amounted to 69.7 per cent. The increase for the year 1925, compared with November, 1914, was 45.1 per cent. Further, in 1925 the cost of the commodities and services included was greatest in Adelaide and Hobart (1,496) and least in Brisbane (1,344).

INDEX-NUMBERS, TOTAL HOUSEHOLD EXPENDITURE, CAPITAL CITIES.—1914 TO 1925.

(NOTE.—Weighted average cost in November, 1914, for all articles in capital cities taken as base = 1,000),

Cities.	November.				Year.		
	1914.	1920.	1921.	1922.	1923.	1924.	1925.
Sydney	1,036	1,736	1,523	1,486	1,488	1,458	1,478
Melbourne	976	1,706	1,460	1,402	1,460	1,420	1,432
Brisbane	889	1,534	1,344	1,276	1,343	1,332	1,344
Adelaide	1,018	1,693	1,440	1,388	1,467	1,476	1,496
Perth	1,029	1,617	1,467	1,355	1,422	1,430	1,446
Hobart	999	1,765	1,556	1,450	1,517	1,529	1,496
Weighted Average ..	1,000	1,697	1,474	1,420	1,460	1,436	1,451

§ 5. Control of Trade, Prices, and House Rents.

In previous issues of the Year Book information was given as to the legislative measures enacted by Federal and State Parliaments for the control of trade, prices, and house rents.

In Queensland the Profiteering Prevention Act 1920, and the Fair Rents Act 1920, and in New South Wales the Fair Rents Act 1915, amended in 1920, are still in force. Similar legislative measures enacted by the other States and by the Federal Parliament have been repealed or allowed to expire by effluxion of time.

B. WAGES.

§ 1. Operations under Wages Board and Industrial Arbitration Acts.

1. **General.**—Particulars of the operations of Wages Boards and Industrial and Arbitration Courts under the Commonwealth and State Acts for the regulation of wages, hours, and conditions of labour were first compiled to the 31st December, 1913, and reviews to the end of approximately quarterly periods appear in Labour Bulletins and Quarterly Summaries to the 31st December, 1925.

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* In Labour Report No. 16, index-numbers are given showing the relative cost from November 1921, to end of 1925, in 30 of the principal towns in Australia.

2. **Awards, Determinations, Industrial Agreements.**—The following table gives a summary for each quarter for the years 1924 and 1925 :—

AWARDS, DETERMINATIONS, AND INDUSTRIAL AGREEMENTS, 1924 AND 1925.

State and Commonwealth.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Full Year.	
	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.
					1924.					
New South Wales	11	9	14	20	15	21	18	6	58	56
Victoria ..	42	..	15	..	11	..	10	..	78	..
Queensland ..	3	1	8	6	17	6	27	7	55	20
South Australia	19	2	6	..	9	1	24	1	58	4
Western Australia	..	12	5	6	3	6	3	13	11	37
Tasmania ..	1	..	3	1	6	..	3	1	13	2
Cwlth. Court ..	2	17	7	11	13	6	22	11	44	45
Cwlth. Pub. Ser. Arbitrator ..	1	..	1	..	..	..	2	..	4	..
Total ..	79	41	59	44	74	40	109	39	321	164
					1925.					
New South Wales	1	8	11	6	15	5	5	16	32	35
Victoria ..	13	..	20	..	12	..	22	..	67	..
Queensland ..	..	7	19	9	26	9	60	8	105	33
South Australia	12	1	9	..	18	1	8	3	47	5
Western Australia	..	20	..	16	2	16	2	14	4	66
Tasmania ..	2	..	1	1	..	..	2	..	5	1
Cwlth. Court ..	6	11	11	11	4	10	35	10	56	42
Cwlth. Pub. Ser. Arbitrator ..	..	..	..	..	2	..	2	..	4	..
Total ..	34	47	71	43	79	41	136	51	320	182

3. **Boards Authorized, Awards, etc., in Force.**—(i) *Totals for Australia.* The following table gives particulars at the dates specified for all States—excepting Western Australia, in which State there is no provision for Boards—of Boards authorized, etc., and including operations under the Commonwealth and the Western Australian Arbitration Acts, of the number of awards, determinations, and industrial agreements in force :—

BOARDS AUTHORIZED, ETC., AWARDS, ETC.—AUSTRALIA, 1913, 1924, AND 1925.

Dates.	Boards Authorized.	Boards Constituted.	Boards which had made Awards or Determinations.	Awards or Determinations in Force.(*a*)	Industrial Agreements in Force.
31st December, 1913	505	501	387(*b*)	575(*c*)	401
30th June, 1924	575	567	528	1,095	635
31st December, 1924	575	538(*d*)	520	1,111	549
30th June, 1925	571	537	518	1,121	583
31st December, 1925	575	541	524	1,181	607

(*a*) Including awards made by Arbitration Courts and the Commonwealth Public Service Arbitrator. (*b*) Owing to the fact that a number of awards under the New South Wales Industrial Disputes Act (1908) were still in force, the Boards constituted for such industries under the Industrial Arbitration Act (1912) had not made any awards. (*c*) Excludng awards or determinations which expired in New South Wales (under the Act of 1908) on 31st December, 1913. (*d*) During 1924 the majority of South Australian Boards expired and all had not been reconstituted at the close of the year.

Considerable expansion of the principle of the fixation of a legal minimum rate of wage and of working conditions took place during the period under review. At the end of 1925, the number of awards or determinations and industrial agreements* in force had increased by 606 and 206 respectively over the number in force at the 31st December, 1913.

(ii) *Summary for States.* The following table gives particulars for each State and the Commonwealth of the number of Boards authorized, etc., for the years specified :—

BOARDS AUTHORIZED, AWARDS, ETC.—SUMMARY, 1913, 1924, AND 1925.

Particulars.	At 31st. Dec.	Commonwealth.		N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
		Court.	Pub. Ser. Arb.							
Boards Authorized, etc. (a)—										
Boards authorized ..	1913	..	..	(b) 216	135	75	56	..	23	505
	1924	..	..	274	176	2	75	..	48	575
	1925	..	..	269	180	2	75	..	49	575
Boards constituted ..	1913	..	..	(b) 223	132	74	51	..	21	501
	1924	..	..	274	174	2	46	..	42	538
	1925	..	..	269	178	2	49	..	43	541
Boards which have made Awards or Determinations	1913	..	..	123	123	74	47	..	19	386
	1924	..	..	259	158	..	65	..	38	520
	1925	..	..	253	166	..	66	..	39	524
Awards and Determinations—										
Awards and Determinations in force ..	1913	17	..	(c) 265	127	73	54	18	21	575
	1924	146	29	320	174	221	81	91	49	1,111
	1925	179	32	321	177	223	101	99	49	1,181
State Awards and Determinations—										
Applying to Whole State	1913	..	..	32	8	3	..	..	15	58
	1924	..	..	31	65	65	7	5	39	212
	1925	..	..	32	66	66	15	4	40	223
Applying to Metropolitan area	1913	..	..	58	..	28	53	13	1	153
	1924	..	..	90	1	50	50	51	..	242
	1925	..	..	91	1	52	62	56	..	262
Applying to Metropolitan and Country areas ..	1913	..	..	49	105	1	..	1	5	161
	1924	..	..	136	94	44	2	8	7	291
	1925	..	..	136	97	45	2	8	7	295
Applying to Country areas	1913	..	..	126	14	41	1	4	..	186
	1924	..	..	63	14	62	22	27	3	191
	1925	..	..	62	13	60	22	31	2	190
Commonwealth Court Awards—										
Awards in force in each State	1913	..	..	13	17	15	16	9	13	..
	1924	..	..	87	110	32	80	38	62	..
	1925	..	..	115	131	35	99	36	66	..
C'wealth Public Service Arbitrator—										
Determinations in force in each State ..	1924	..	..	28	26	25	25	25	24	..
	1925	..	..	31	27	26	26	26	25	..
Industrial Agreements—										
In force	1913	228	..	75	..	5	11	82	..	401
	1924	221	..	135	..	62	44	85	2	549
	1925	229	..	142	..	86	46	101	3	607
C'wealth Agreements in force in each State ..	1913	..	..	132	129	68	62	57	61	..
	1924	..	..	68	96	24	24	11	19	..
	1925	..	..	80	93	27	26	19	24	.

(*a*) The figures for New South Wales are exclusive of Demarcation Boards.
(*b*) Including boards which were subsequently dissolved, owing to alteration in the sectional arrangement of industries and callings.
(*e*) Omitting a number of awards which expired on the 31st December, 1913.

§ 2. Rates of Wage and Hours of Labour.

1. General.—The collection of information respecting the current rates of wage payable in different callings and in occupations in various industries was first undertaken by the Commonwealth Bureau of Census and Statistics in the early part of the year 1913. The particulars acquired were obtained primarily from awards, determinations and agreements, under Commonwealth and State Acts, and therefore show the minimum rates prescribed. They refer generally to the capital city in each State, but in industries which obviously are not carried on in the capital cities, *e.g.*, mining, agriculture, etc., the rates in the more important centres have been taken. In cases where no award, determination, or agreement is in force, particulars are given, where available, of the ruling union or predominant rate as furnished by employers or secretaries of trade unions. The total number of occupations for which particulars of wages are available back to 1901 is 652. Since 1913, when the scope of the inquiry was extended to 930 specified industries and 4,256 adult occupations (3,948 male and 308 female), the number of occupations included in the comparative computations has been kept constant.

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* The registration of industrial agreements is not provided for under the Victorian Act, but such agreements may be registered and filed under the provisions of the Commonwealth Conciliation and Arbitration Act.

The index-numbers for male adult workers were computed with the weighted average wage in 1911 as base (=1,000) in order that comparisons might more readily be made between these index-numbers and the retail prices index-numbers which are also computed to the year 1911 as base. In the case of females, however, it has not been possible to secure information for years prior to 1914, and the index-numbers are therefore computed with the weighted average rate of wage payable to adult female workers in Australia at 30th April, 1914, as base (=1,000).

An extensive tabular presentation of the minimum rates of wage for adult male and female workers in the main occupations in the capital city of each State is given in the Appendix to Labour Report, No. 16.

2. Weekly Rates of Wage, 1920 to 1925.—(i) *General.* The arithmetical average of the rates of wage given in the Appendix referred to furnishes the basis for the computation of relative weighted wages in the different States and industrial groups.

(ii) *Adult Males—States.* The following table gives the weighted average nominal weekly rates of wage payable to adult male workers at the 31st December in the years 1920 to 1925 for a full week's work in each State and Australia, together with index-numbers computed with the average for Australia for the year 1911 as base (=1,000).

WAGES.—ADULT MALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE PAYABLE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS, 31st DECEMBER, 1920 TO 1925.

NOTE.—Index-numbers based on the average wage for Australia in 1911 (51s. 3d.) as base (=1,000). The index-numbers in this table are comparable throughout.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia. (a)
No. of Occupations Included ..	874	909	627	567	489	482	3,948
RATES OF WAGE.							
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1920 ..	94 0	86 1	91 6	82 8	89 9	85 9	89 10
31st December, 1921 ..	95 10	93 7	96 8	89 5	95 0	91 8	94 6
31st December, 1922 ..	91 6	91 4	93 10	87 6	93 9	88 5	91 6
31st December, 1923 ..	94 6	95 7	94 2	90 9	94 2	92 4	94 4
31st December, 1924 ..	93 6	95 5	95 9	91 10	94 8	92 6	94 3
31st March, 1925 ..	93 8	95 3	95 10	92 0	95 0	92 9	94 4
30th June, 1925	93 11	95 6	95 10	92 6	96 3	92 11	94 8
30th September, 1925 ..	94 11	96 1	99 0	94 1	96 10	93 1	95 10
31st December, 1925 ..	96 0	97 2	99 11	94 4	97 0	93 5	96 9
INDEX-NUMBERS.							
31st December, 1920 ..	1,835	1,679	1,785	1,613	1,751	1,674	1,752
31st December, 1921 ..	1,869	1,826	1,886	1,745	1,853	1,788	1,844
31st December, 1922 ..	1,785	1,783	1,830	1,708	1,829	1,726	1,785
31st December, 1923 ..	1,844	1,865	1,837	1,770	1,838	1,802	1,840
31st December, 1924 ..	1,824	1,862	1,868	1,791	1,847	1,805	1,839
31st March 1925	1,827	1,858	1,869	1,795	1,853	1,809	1,840
30th June, 1925	1,832	1,864	1,870	1,804	1,877	1,812	1,846
30th September, 1925 ..	1,853	1,874	1,931	1,835	1,889	1,817	1,869
31st December, 1925 ..	1,873	1,897	1,950	1,841	1,893	1,823	1,887

(*a*) Weighted average.

The results show that at the 31st December, 1925, the weighted average nominal weekly rate of wage was highest in Queensland, followed in the order named by Victoria, Western Australia, New South Wales, South Australia, and Tasmania. In all States wages increased rapidly from December, 1919, to the end of 1921. During 1922, however, the average declined on account of adjustments made in accordance with the decrease in the cost of living. In 1923, the average wage increased in each State. During 1924, wages decreased in New South Wales and Victoria, but there was sufficient movement in the opposite direction in the remaining States to allow the weighted average for Australia as a whole to remain practically stationary. Nominal wages showed a progressively upward trend in all States during 1925, with the sole exception of Victoria, where the weighted average nominal weekly rate at 31st March, 1925, showed a slight decrease as compared with the rate at 31st December, 1924. Subsequently, however, wages in Victoria rose steadily. The largest percentage increase during the period under review was in South Australia with 14.1 per cent., followed by Victoria, 12.9 per cent., Queensland 9.3 per cent., Tasmania 8.9 per cent., Western Australia 8.1 per cent., and New South Wales 2.1 per cent. The increase in the weighted average for Australia was 7.7 per cent.

(iii) *Adult Males—Industrial Groups.* The following table shows (*a*) the average weekly rate of wage in each of the fourteen industrial groups, (*b*) the weighted average wage for all groups combined, and (*c*) index-numbers based on the average wage for all groups in 1911 (51s. 3d.), as base (=1,000) :—

WAGES.—ADULT MALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS IN EACH INDUSTRIAL GROUP, 31st DECEMBER, 1921 TO 1925.

NOTE.—Index-numbers for each industrial group and all industrial groups, based on the average wage for all groups in 1911 (51s. 3d.), as base (=1,000). The index-numbers in this table are comparable throughout.

Industrial Group.		Weighted Average Nominal Weekly Rate of Wage, and Index-Number at—							
		31st Dec., 1921.	31st Dec., 1922.	31st Dec., 1923.	31st Dec., 1924.	31st March, 1925.	30th June, 1925.	30th Sept., 1925.	31st Dec., 1925.
		s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
I. Wood, Furniture, etc.	Wage ..	98.2	95.4	99.2	99.7	100.0	99.7	100.9	101.2
	Index-No.	1,916	1,860	1,935	1,943	1,951	1,944	1,965	1,973
II. Engineering, etc.	Wage ..	98.2	93.10	97.4	97.5	97.6	97.9	99.6	100.4
	Index-No.	1,915	1,832	1,900	1,901	1,902	1,907	1,941	1,957
III. Food, Drink, etc.	Wage ..	93.10	91.10	94.2	94.0	94.5	94.8	95.8	96.6
	Index-No.	1,832	1,792	1,837	1,835	1,842	1,847	1,867	1,883
IV. Clothing, Boots, etc.	Wage ..	93.3	91.1	93.11	93.0	92.7	92.7	93.0	93.2
	Index-No.	1,819	1,777	1,833	1,815	1,807	1,807	1,814	1,817
V. Books, Printing, etc.	Wage ..	104.7	102.9	104.5	108.3	107.9	107.9	108.2	109.6
	Index-No.	2,040	2,004	2,037	2,113	2,102	2,102	2,110	2,137
VI. Other Manufacturing	Wage ..	95.0	91.11	96.2	95.6	95.9	96.3	97.5	98.2
	Index-No.	1,854	1,793	1,876	1,863	1,868	1,877	1,901	1,915
VII. Building ..	Wage ..	102.5	100.5	103.8	105.6	105.7	106.3	107.10	108.5
	Index-No.	1,999	1,960	2,023	2,058	2,060	2,074	2,104	2,115
VIII. Mining, etc. ..	Wage ..	105.4	103.8	104.5	104.2	104.0	104.11	105.2	108.7
	Index-No.	2,056	2,022	2,037	2,033	2,030	2,047	2,052	2,119
IX. Railways, etc. ..	Wage ..	97.5	93.4	97.8	96.11	97.0	98.4	99.6	100.6
	Index-No.	1,901	1,821	1,906	1,892	1,892	1,918	1,941	1,962
X. Other Land Transport ..	Wage ..	90.2	88.5	92.6	89.4	89.8	90.2	92.6	93.3
	Index-No.	1,760	1,725	1,806	1,744	1,750	1,759	1,804	1,820
XI. Shipping, etc. (*a*) ..	Wage ..	101.8	99.9	102.4	97.10	98.3	99.2	103.0	104.8
	Index-No.	1,984	1,947	1,997	1,908	1,917	1,935	2,010	2,043
XII. Agricultural, etc. (*b*) ..	Wage ..	89.0	83.11	85.8	85.10	85.11	85.11	86.4	87.4
	Index-No.	1,736	1,637	1,671	1,675	1,676	1,676	1,685	1,704
XIII. Domestic, etc. (*b*)	Wage ..	84.2	82.4	84.6	86.0	86.3	86.6	88.9	89.1
	Index-No.	1,642	1,606	1,648	1,678	1,682	1,688	1,732	1,738
XIV. Miscellaneous ..	Wage ..	91.1	88.8	92.3	92.2	92.1	92.4	93.9	93.11
	Index-No.	1,778	1,730	1,800	1,798	1,797	1,801	1,828	1,833
All Industrial Groups (*c*)	Wage ..	94.6	91.6	94.4	94.3	94.4	94.8	95.10	96.9
	Index-No.	1,844	1,785	1,840	1,839	1,840	1,846	1,869	1,887

(*a*) Including the value of victualling and accommodation where supplied. (*b*) Including the value of board and lodging where supplied. (*c*) Weighted average.

The foregoing table shows that the rate of increase in the weighted average weekly wage in occupations and callings classified in the fourteen industrial groups during the period 31st December, 1921 to 1925, was greatest in Group XIII. (Domestic, etc.), 5.9 per cent., followed in the order named by Groups VII. (Building), 5.8 per cent., V. (Books, Printing, etc.), 4.7 per cent., and X. (Other Land Transport), 3.4 per cent. The smallest increase occurred in Group II. (Engineering, etc.), 2.2 per cent., whilst two groups (Clothing, Boots, etc., and Agricultural, etc.), showed decreases of 0.09 and 1.86 per cent. respectively. In eleven of the groups the increase was more, and in three groups less than the increase in the weighted average for all groups. During the year 1925, increases in average wages occurred in all industrial groups, the greatest being 7.1 per cent. in Group XI. (Shipping, etc.), followed by 4.4 per cent. in Group X. (Other Land Transport), 4.2 per cent. in Group VIII. (Mining) and 3.7 per cent. in Group IX. (Railways, etc.). The percentage increase during the year was least in Group IV. (Clothing, Boots, etc.), 0.1 per cent. The weighted average wage for all groups combined increased by 2.6 per cent.

(iv) *Adult Females—States.* The following table shows the weighted average weekly rate of wage payable to adult female workers for a full week's work in each State and Australia at the dates specified. Index-numbers are given also for each State based on the average weekly wage at the end of each of the periods indicated, computed with the weighted average wage for all States at the 30th April, 1914, as base (=1,000).

WAGES.—ADULT FEMALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE PAYABLE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS, 31st DECEMBER, 1920 TO 1925.

NOTE.—Index-numbers based on the average wage for Australia at the 30th April, 1914 (27s. 2d.) as base (=1,000). The index-numbers in this table are comparable throughout.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.(a)
No of Occupations Included ..	85	87	37	47	24	28	308
RATES OF WAGE.							
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1920 ..	46 0	43 1	44 11	40 7	52 11	41 10	44 6
31st December, 1921 ..	49 0	47 10	50 3	45 2	56 4	57 6	48 8
31st December, 1922 ..	47 8	48 0	48 2	44 0	56 4	47 7	47 11
31st December, 1923 ..	49 3	49 5	50 5	46 4	56 4	48 6	49 6
31st December, 1924 ..	49 1	49 7	50 10	46 6	56 11	50 3	49 7
31st March, 1925 ..	49 0	49 7	50 8	47 3	56 11	50 1	49 7
30th June, 1925	49 0	49 9	50 8	47 5	57 2	50 1	49 8
30th September, 1925 ..	49 6	49 11	51 7	48 4	57 6	50 1	50 2
31st December, 1925 ..	49 8	50 8	51 9	48 10	57 6	50 2	50 7
INDEX-NUMBERS.							
31st December, 1920 ..	1,695	1,586	1,652	1,495	1,947	1,540	1,637
31st December, 1921 ..	1,803	1,761	1,849	1,661	2,074	1,749	1,790
31st December, 1922 ..	1.754	1,767	1,771	1,620	2,075	1,751	1,763
31st December, 1923 ..	1,812	1,819	1,855	1,704	2,075	1,785	1,821
31st December, 1924 ..	1,807	1,824	1,872	1,710	2,094	1,850	1,826
31st March, 1925 ..	1,803	1,825	1,865	1,738	2,094	1,843	1,826
30th June, 1925	1,803	1,830	1,865	1,745	2,104	1,844	1,829
30th September, 1925 ..	1,821	1,837	1,898	1,779	2,116	1,844	1,845
31st December, 1925 ..	1,827	1,866	1,904	1,796	2,116	1,845	1,861

(a) Weighted average.

As in the case of male occupations, female wages increased rapidly up to December, 1921, but in 1922 reductions were recorded. The decrease over the whole of Australia was relatively much less than in the case of males. There was an increase in each State during 1923, with the exception of Western Australia, where the wages remained stationary. The upward tendency was continued during 1924 with increases in all States with the exception of New South Wales. During 1925, the Australian average rose from 49s. 7d. to 50s. 7d., each State, with the exception of Tasmania, showing increases. The advance in the Australian average during the period under review was 13.6 per cent.

(v) *Adult Females—Industrial Groups.* The following table gives particulars of the weighted average weekly rate of wage payable to adult female workers in the industrial groups in which they are mainly employed, and in all groups combined. Taking the average wage for all groups at the 30th April, 1914, as base (=1,000), index-numbers are given computed on the average rate of wage ruling at the end of each period indicated.

WAGES.—ADULT FEMALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE PAYABLE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS IN EACH INDUSTRIAL GROUP, 31st DECEMBER, 1920, TO 1925.

NOTE.—Index-numbers for each Industrial Group and all Industrial Groups, based on the average wage for all groups at 30th April, 1914 (27s. 2d.), as base (=1,000). The index-numbers in this table are comparable throughout.

Date.	Industrial Group.					
	III. Food, Drink, etc.	IV. Clothing, Boots, etc.	I., II., V. and VI., All Other Manufacturing.	XIII. Domestic, Hotels, etc. (a).	XIV. Miscellaneous.	All Groups. (b).
			RATES OF WAGE.			
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1920 ..	41 10	43 5	44 0	46 3	46 2	44 6
31st December, 1921 ..	43 9	48 7	48 0	48 6	50 0	48 8
31st December, 1922 ..	43 3	47 10	47 4	48 3	48 9	47 11
31st December, 1923 ..	44 1	50 1	48 10	49 5	49 6	49 6
31st December, 1924 ..	45 2	49 7	49 6	49 7	50 7	49 7
31st March, 1925 ..	45 1	49 6	49 4	49 8	50 11	49 7
30th June, 1925 ..	45 2	49 6	49 5	49 10	51 2	49 8
30th September, 1925	45 4	49 7	50 0	50 8	52 0	50 2
31st December, 1925 ..	45 8	50 1	51 2	51 0	52 0	50 7
			INDEX-NUMBERS.			
31st December, 1920 ..	1,538	1,597	1,619	1,701	1,700	1,637
31st December, 1921 ..	1,609	1,789	1,766	1,787	1,841	1,790
31st December, 1922 ..	1,593	1,762	1,741	1,777	1,794	1,763
31st December, 1923 ..	1,622	1,842	1,799	1,819	1,821	1,821
31st December, 1924 ..	1,661	1,826	1,821	1,824	1,862	1,826
31st March, 1925 ..	1,658	1,821	1,815	1,829	1,873	1,826
30th June, 1925 ..	1,662	1,821	1,817	1,834	1,882	1,829
30th September, 1925	1,668	1,824	1,841	1,865	1,914	1,845
31st December, 1925 ..	1,682	1,844	1,884	1,877	1,914	1,861

(a) Including the value of board and lodging, where supplied. (b) Weighted average.

The greatest increase in the weekly rate of wage during the period under review occurred in Groups I., II., V., and VI. (All Other Manufacturing), 16.3 per cent., followed in the order named by Group IV. (Clothing, Boots, etc.), 15.4 per cent., XIV. (Miscellaneous), 12.6 per cent., XIII. (Domestic, Hotels, etc.), 10.3 per cent., and III. (Food, Drink, etc.), 9.3 per cent. The weighted average weekly rate for all groups was 13.6 per cent. higher at the end of 1925 than at the 31st December, 1920.

Average wages for females in each industrial group increased during the year 1925, the largest increase being 3.5 per cent. in Groups I., II., V., and VI., followed in the order named by Groups XIII., 2.9 per cent., XIV., 2.8 per cent., III., 1.3 per cent., and IV. 1.0 per cent. The weighted average for all groups increased by 1.9 per cent.

3. **Relative Hours of Labour and Hourly Rates of Wage, 1921 to 1925.**—(i) *General.* The rates of wage referred to in preceding paragraphs relate to the minimum payable for a full week's work. The number of hours constituting a full week's work differs, however, in many instances between various trades and occupations in each State, and between the same trades and occupations in the several States. In order to secure what may be for some purposes a more adequate standard of comparison, it is desirable to reduce the comparison to a common basis, viz., the rate of wage per hour. Particulars are given in the following table classified according to States, for male and female occupations separately, at the end of the years 1921 to 1925. These particulars relate to (*a*) the weighted average nominal weekly wage, (*b*) the weighted average number of working hours constituting a full week's work, and (*c*) the weighted average hourly wage. The weighted average weekly wage relates to all industrial groups combined, and includes the value of board and lodging where supplied in land occupations, and the value of victualling in

marine occupations, whereas the number of working hours and the hourly wage relate to all industrial groups other than Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.). Many of the occupations included in these two groups are of a casual or seasonal nature, and the hours of labour are not generally regulated either by awards or determinations of industrial tribunals or otherwise, hence the necessary data for the computation of the average number of working hours are not available.

The general effect of reducing the rates of wage to a common basis (*i.e.*, per hour) is to eliminate on comparison any apparent difference between the several States which may be due to unequal working time.

(ii) *Adult Males and Females.* Particulars for the last five years for adult males and females are given in the table hereunder :—

WEEKLY AND HOURLY WAGES AND HOURS OF LABOUR.—ADULT WORKERS, 1921 TO 1925.

Date.	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus.
	MALE WORKERS.							
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1921	Weekly Wage (*a*) ..	95 10	93 7	96 8	89 5	95 0	91 8	94 6
	Working Hours (*b*) ..	45.66	46.95	45.52	47.07	46.24	46.84	46.22
	Hourly Wage (*b*) ..	2/1¼	2/0¼	2/2	1/10¾	2/1	1/11½	2/0¾
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s d..
31st Dec., 1922	Weekly Wage (*a*) ..	91 6	91 4	93 10	87 6	93 9	88 5	91 6
	Working Hours (*b*) ..	46.05	46.99	45.51	47.00	46.41	46.93	46.38
	Hourly Wage (*b*) ..	2/0¼	1/11¾	2/1¼	1/10¾	2/0¾	1/10¾	2/–
		s. d.	s. d.	s. d.	s. d.	s . d.	s. d.	s. d.
31st Dec., 1923	Weekly Wage (*a*) ..	96 6	98 0	95 9	91 8	95 2	93 3	96 3
	Working Hours (*b*) ..	46.73	47.06	45.51	47.00	46.66	47.27	46.70
	Hourly Wage (*b*) ..	2/0¾	2/1	2/1¼	1/11½	2/0½	1/11¾	2/0¾
		s. d.	s. d.	s. d.	s. d	s d.	s. d	s. d.
31st Dec., 1924	Weekly Wage (*a*) ..	93 6	95 5	95 9	91 10	94 8	92 6	94 3
	Working Hours (*b*) ..	46.75	46.99	45.40	46.98	46.52	47.26	46.66
	Hourly Wage (*b*) ..	2/0½	2/1	2/1¾	1/11¾	2/0¾	1/11¾	2/0¾
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1925	Weekly Wage (*a*) ..	96 0	97 2	99 11	94 4	97 0	93 5	96 9
	Working Hours (*b*) ..	46.76	46.98	43.88	46.97	46.26	47.25	46.44
	Hourly Wage (*b*) ..	2/1¼	2/1½	2/3¾	2/0½	2/1½	2/–	2/1½
	FEMALE WORKERS.							
		s. d.	s. d.	s. d.	s. d.	s. d	s. d.	s. d.
31st Dec., 1921	Weekly Wage ..	49 0	47 10	50 3	45 2	56 4	47 6	48 8
	Working Hours ..	45.06	46.04	45.66	46.10	45.97	47.86	45.69
	Hourly Wage ..	1/1	1/0½	1/1¼	–11¾	1/2¾	1/–	1/0¾
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1922	Weekly Wage ..	47 8	48 0	48 2	44 0	56 4	47 7	47 11
	Working Hours .	45.33	46.14	45.60	46.10	45.97	47.86	45.82
	Hourly Wage ..	1/0½	1/0½	1/0¾	–/11½	1/2¾	1/–	1/0½
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1923	Weekly Wage ..	49 3	49 5	50 5	46 4	56 4	48 6	49 6
	Working Hours ..	45.81	46.13	45.60	46.10	45.97	47.86	45.98
	Hourly Wage ..	1/1	1/0½	1/1¼	1/0	1/2¾	1/0¼	1/1
		s. d.	s. d.	s. d.	s d.	s d.	s. d.	s. d.
31st Dec., 1924	Weekly Wage ..	49 1	49 7	50 10	46 6	56 11	50 3	49 7
	Working Hours ..	45.98	46.08	45.60	46.10	45.97	47.86	46.02
	Hourly Wage ..	1/0¾	1/1	1/1½	1/–	1/2¾	1/0½	1/1
		s. d.	s. d	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1925	Weekly Wage ..	49 8	50 8	51 9	48 10	57 6	50 2	50 7
	Working Hours ..	46.17	45.83	44.00	46.10	45.57	47.86	45.78
	Hourly Wage ..	1/1	1/1¼	1/2	1/0¾	1/3¼	1/0½	1/1¼

(*a*) Weighted average weekly rate in all Industrial groups combined. (*b*) Weighted average working hours per week, and computed hourly rates of wage for all industrial groups excepting Groups XI. (Shipping, etc.), and XII. (Agricultural, Pastoral, etc.). Working hours have not been generally regulated by industrial tribunals for occupations classified in industrial groups XI. and XII.

(iii) *Index-numbers.* There was a diminution in each of the States during the year 1921 in the number of working hours constituting a full week's work for male and female occupations, but during 1922 and 1923 certain increases in hours were recorded, principally in New South Wales. The tendency in a majority of the States during the years 1924 and 1925 has been towards a slight reduction in hours of labour, particularly in Queensland where a 44-hour week became operative on 1st July, 1925. The effect of these changes on the hourly rate of wage as compared with the general increase in the weekly wage is readily seen from the comparative index-numbers given in the following table. In each instance (male and female occupations separately) the basis taken is the weighted average for Australia at the 30th April, 1914 (=1,000).

WEEKLY AND HOURLY WAGE INDEX-NUMBERS.—ADULT WORKERS, 1921 TO 1925.

NOTE.—Weighted average for Australia at 30th April, 1914, as base (=1,000).

Date.	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
	MALE WORKERS.							
31st Dec., 1921	Weekly Wage ..	1,738	1,697	1,753	1,623	1,723	1,663	1,715
	Hourly Wage ..	1,817	1,741	1 865	1 637	1,796	1,675	1,779
31st Dec., 1922	Weekly Wage ..	1,660	1 657	1,702	1,588	1,701	1,605	1,660
	Hourly Wage ..	1,735	1 709	1,803	1,621	1,766	1,628	1,726
31st Dec., 1923	Weekly Wage ..	1,714	1,734	1,708	1,646	1,709	1,675	1,711
	Hourly Wage ..	1,775	1,790	1,808	1,676	1,754	1,696	1,771
31st Dec., 1924	Weekly Wage ..	1,696	1,731	1,737	1,665	1,717	1,679	1,710
	Hourly Wage ..	1,761	1,790	1,838	1,709	1,771	1,706	1,774
31st Dec., 1925	Weekly Wage ..	1,741	1,763	1,813	1,712	1,760	1,695	1,755
	Hourly Wage ..	1,808	1,823	1,988	1,761	1,827	1,723	1,829
	FEMALE WORKERS.							
31st Dec., 1921	Weekly Wage ..	1,803	1,761	1,849	1,661	2,074	1,749	1.790
	Hourly Wage ..	1,965	1,878	1,989	1,770	2,215	1,794	1.923
31st Dec., 1922	Weekly Wage ..	1,754	1,767	1,771	1,620	2,075	1,751	1,763
	Hourly Wage ..	1,899	1,881	1,908	1,726	2,215	1,797	1,889
31st Dec., 1923	Weekly Wage ..	1,812	1,819	1,855	1,704	2,075	1,785	1,821
	Hourly Wage ..	1,943	1,937	1,997	1,815	2,215	1,831	1,944
31st Dec., 1924	Weekly Wage ..	1,807	1,824	1,872	1,710	2,094	1,850	1,826
	Hourly Wage ..	1,929	1,943	2,017	1,821	2,236	1,898	1,949
31st Dec., 1925	Weekly Wage ..	1,827	1,866	1,904	1,796	2,116	1,845	1,861
	Hourly Wage ..	1,944	2,000	2,125	1,913	2,280	1,893	1,995

4. **Weighted Average Nominal Weekly Hours of Labour, Adult Males.**—The following table shows the weighted average nominal hours of labour (exclusive of overtime) in a full working week for male workers in each State and Australia at the 31st December, 1921 to 1925. Index-numbers are given also for each State based on the weekly average hours at the end of each of the periods specified, computed with the weighted average hours of labour for Australia at the 30th April, 1914, as base (=1,000).

HOURS OF LABOUR.—WEEKLY INDEX-NUMBERS, ADULT MALES, 1921 TO 1925.

NOTE.—Index-numbers based on the Average Hours of Labour for Australia at the 30th April, 1914 (48.93) as base (=1,000). The index-numbers in this table are comparable throughout. Overtime is excluded.

Date.	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
31st Dec., 1921	Weighted average weekly hours of labour (*a*) ..	45.66	46.95	45.52	47.07	46.24	46.84	46.22
	Index-numbers ..	933	960	930	962	945	957	945
31st Dec., 1922	Weighted average weekly hours of labour (*a*) ..	46.05	46.99	45.51	47.00	46.41	46.93	46.38
	Index-numbers ..	941	960	930	961	948	959	948
31st Dec., 1923	Weighted average weekly hours of labour (*a*) ..	46.73	47.06	45.51	47.00	46.66	46.27	46.70
	Index-numbers ..	955	962	930	961	954	966	954
31st Dec., 1924	Weignted average weekly hours of labour (*a*) ..	46.75	46.99	45.40	46.98	46.52	47.26	46.66
	Index-numbers ..	955	960	928	960	951	966	954
31st Dec., 1925	Weighted average weekly hours of labour (*a*) ..	46.76	46.98	43.88	46.97	46.26	47.25	46.44
	Index-numbers ..	956	960	897	960	945	966	949

(*a*) Weighted average working hours per week for all industrial groups excepting Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.), in which working hours have not been generally regulated by industrial tribunals.

There was a diminution in each State during the year 1921 in the number of working hours constituting a full week's work for male occupations, but during 1922 and 1923, in certain States, especially in New South Wales, hours of labour were increased. Each State, excepting New South Wales, shows a decrease for both 1924 and 1925. The weighted average weekly hours index-number for Australia at the 31st December, 1925, was 949, as compared with 1,000 at 30th April, 1914, a reduction of 5.1 per cent. The lowest weighted average nominal weekly hours index-number at the 31st December, 1925, was that for Queensland (897), followed in the order named by Western Australia (945), New South Wales (956), South Australia and Victoria (960), and Tasmania (966).

5. Nominal and Effective Wages, 1901 to 1925.—(i) *Nominal Weekly Wage Index-numbers—States.* The following table shows the progress in nominal weekly rates of wage for all industries in each State, the weighted average rate for Australia in 1911 being taken as the base (=1,000). These results are based generally upon rates of wage prevailing in the capital city of each State, but in certain industries, such as mining, rates are necessarily taken for places other than the capital cities.

NOMINAL WAGE INDEX-NUMBERS, ADULT MALES, 1901 TO 1925.

(WEIGHTED AVERAGE WAGE FOR AUSTRALIA IN 1911=1,000.)

States.	Number of Occupations included.		1901.	1911.	1914.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.
	1901 to 1912.	1913 to 1924.												
New South Wales ..	158	874	858	1,003	1,096	1,257	1,286	1,498	1,835	1,869	1,785	1,844	1,824	1,873
Victoria	150	909	796	985	1,065	1,229	1,278	1,404	1,679	1,826	1,783	1,865	1,862	1,897
Queensland.. ..	87	627	901	997	1,042	1,273	1,356	1,534	1,785	1,886	1,830	1,837	1,868	1,950
South Australia ..	134	567	819	1,013	1,062	1,231	1,278	1,373	1,613	1,745	1,708	1,770	1,791	1,841
Western Australia ..	69	489	1,052	1,152	1,226	1,345	1,372	1,516	1,751	1,853	1,829	1,838	1,847	1,893
Tasmania	54	482	719	799	1,028	1,163	1,193	1,346	1,674	1,788	1,726	1,802	1,805	1,823
Australia (*a*) ..	652	3,948	848	1,000	1,085	1,252	1,296	1,462	1,752	1,844	1,785	1,840	1,839	1,887

(*a*) Weighted average.

NOTE.—The figures in the above table are comparable both horizontally and vertically.

During the period 1911 to the end of the year 1925 the average weekly rate of wage in New South Wales increased 87 per cent., in Victoria 93 per cent., in Queensland 96 per cent., in South Australia 82 per cent., in Western Australia 64 per cent., and in Tasmania 128 per cent., while the weighted average weekly rate for Australia increased 89 per cent.

(ii) *Effective Weekly Wage Index-numbers—States.* In comparing wages, two elements are of obvious importance, viz., (i) hours worked per day or week, and (ii) the cost of commodities and housing. Thus 60s. per week of 60 hours represents the same hourly rate as 48s. per week for 48 hours. Similarly, if the cost of commodities and housing increases 25 per cent., *e.g.*, if the prices index-number rises from 1,000 to 1,250, then 60s. per week (the index-number being 1,250) is effectively equal only to 48s. (when the index-number was 1,000). Or, again, if the prices index-number falls from 1,000 to 750, then 60s. per week, when the index-number is 750, would have the same purchasing power as 80s. when the index-number was 1,000. Ignoring for the present the number of hours worked, and assuming that the real value of the average wages is to be measured by their purchasing power, the actual average wages paid may be reduced to their effective value by applying the prices index-numbers to the nominal wages index-numbers. The following table shows the effective wage index-numbers so ascertained in each State for each of the years indicated from 1901 to 1925.

In computing these effective wage index-numbers for years prior to 1914, the nominal wage index-numbers given in the preceding table have been divided by the price index-numbers in Section A §2. The resulting index-numbers show for each State and for Australia for the years specified the variations in effective wages. The nominal wage index-numbers for these earlier years are based on rates of wage current at the end of December, the only data available. For the years 1914 onward, however, the nominal wage index-numbers used are based on the average wage for the four quarters in each year, and in this respect differ from those in the preceding sub-sections. However, so far as the years 1901 and 1911 are concerned, as the movement in wages during any one year prior to 1914 was very slight, it is possible that if the wage data were available in quarters, the index-numbers used would approximate very closely to those based on averages for the year.

EFFECTIVE WEEKLY WAGE INDEX NUMBERS.—ADULT MALES, 1901 TO 1925.(a)

Particulars.	1901.	1911.	1914.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.
New South Wales ..	961	973	906	882	890	875	911	1,079	1,113	1,040	1,069	1,048
Victoria	915	1,037	961	929	925	904	875	1,038	1,102	1,036	1,097	1.073
Queensland	1,172	1,090	1,038	1,041	1,042	990	1,036	1,244	1,273	1,214	1,232	1,241
South Australia	948	957	929	961	934	901	853	1,027	1,090	1,036	1,051	1,053
Western Australia ..	1,024	1,023	1,070	1,051	1,095	1,008	1,012	1,139	1,226	1,192	1,161	1,162
Tasmania	827	838	942	875	869	840	830	977	1,053	1,000	1,017	1,044
Australia (b) ..	964	**1,000**	948	930	932	907	911	1,076	1,126	1,062	1,095	1,081

(a) As to the effect in abnormal periods, see Labour Report No. 6, pp. 20–2, Section IV., par. 3.
(b) Weighted average.

In the table above the effective wage index-numbers are computed to the one base, that of Australia for 1911. Subject to the qualification already referred to, which, as has been pointed out, does not materially affect the figures, the index-numbers are comparable in all respects, and comparisons may be made as to the increase or decrease in the effective wage index-number for any State over a period of years. Thus, comparing 1925 with 1901, and also with 1911, there has been an increase in the effective wage in all States.

(iii) *Effective Wages and Standard of Comfort.* In the preceding table particulars are given as to variations in effective wages in each State, due allowance having been made for variations in retail prices of commodities, though not for unemployment.

For years prior to 1913 the data available as to unemployment are so meagre that comparative results allowing for variations both in prices of commodities and in unemployment cannot be accurately computed for the several States. In the next table, for these earlier years the percentage of unemployment in Australia and the nominal wage index-numbers relate to the end of the year. For 1914 and subsequent years the wages index-numbers, percentages of unemployment, and retail prices index-numbers are the average for the year. Column I. shows the nominal wage index-numbers, and Column II. the relative percentages unemployed. Applying these percentages to the numbers shown in Column I., and deducting the results from each corresponding index-number to allow for relative loss of time, the figures in Column III. are obtained. These figures are then re-computed with the year 1911 as base, and are shown in Column IV. In Column V. the retail prices index-numbers are shown, and in Columns VI. and VII. the effective wage index-numbers are given, firstly, for full work, and secondly, allowing for lost time. These are obtained by dividing the figures in Columns I. and IV. respectively by the corresponding figure in Column V. The resulting index-numbers show for Australia for the years specified the variations in effective wages, or in what may be called the "standard of comfort."*

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* This expression must not be confused with "standard of living." A change in the standard of living necessarily involves a change in regimen (*see* Labour Report No. 4), that is, a change in the nature or in the relative quantity of commodities purchased, or both. A change in the "standard of comfort" merely implies a variation in effective wages, which variation may, or may not, result in, or be accompanied by, a change in the "standard of living."

A comparison between the figures in Columns I. and VI. gives the relation between the normal rates of wage and the purchasing efficiency of these rates. The figures in Column VII. show variations in effective wages after allowing not only for variations in purchasing power of money, but for the relative extent of unemployment also.

WAGE INDEX-NUMBERS, NOMINAL AND EFFECTIVE, 1901 TO 1925.(*a*)

Year.	I. Nominal Wage Index-Numbers.	II. Percentage Unemployed.	Rate of Wage Index-Numbers, Allowing for Lost Time. III. Actual.	IV. Re-computed. (1911 = 1,000).	V. Retail Price Index-Numbers.	Effective Wage Index-Numbers. VI. Full Work.	VII. Allowing for Unemployment.
1901 ..	848	6.6	793	832	880	964	945
1906 ..	866	6.7	808	848	902	960	940
1907 ..	893	5.7	842	884	897	996	986
1908 ..	900	6.0	846	888	951	946	934
1909 ..	923	5.8	870	913	948	974	963
1910 ..	955	5.6	901	945	970	985	974
1911 ..	**1,000**	4.7	953	**1,000**	**1,000**	**1,000**	**1,000**
1912 ..	1,051	5.5	993	1,042	1,101	955	946
1913 ..	1,076	5.3	1,021	1,071	1,104	975	970
1914 ..	1,081	8.3	991	1,040	1,140	948	912
1915 ..	1,092	9.3	990	1,039	1,278	854	813
1916 ..	1,144	5.8	1,078	1,131	1,324	864	854
1917 ..	1,226	7.1	1,139	1,195	1,318	930	907
1918 ..	1,270	5.8	1,196	1,255	1,362	932	921
1919 ..	1,370	6.6	1,280	1,343	1,510	907	889
1920 ..	1,627	6.5	1,521	1,596	1,785	911	894
1921 ..	1,826	11.2	1,621	1,701	1,697	1,076	1,002
1922 ..	1,801	9.3	1,634	1,715	1,600	1,126	1,072
1923 ..	1,805	7.1	1,677	1,760	1,700	1,062	1,035
1924 ..	1,840	8.9	1,676	1,759	1,681	1,095	1,046
1925 ..	1,861	8.9	1,695	1,779	1,722	1,081	1,033

(*a*) As to the effect in abnormal periods, see Section IV., par. 3, of Labour Report No. 6.

NOTE.—For years prior to 1914, the nominal wage index-numbers and the percentage unemployed relate to the end of the year only, but from 1914 onward these figures, in addition to those for retail prices, are averages for the whole year.

Compared with 1911 the effective wage in 1901 was 3.6 per cent. less for full work, and 5.5 per cent. less after allowance for unemployment. In connexion with the index-numbers in Column VII., unemployment was less in 1911—the base year—than in any other year. During the period 1912 to 1920, while wages increased steadily, prices increased at a greater rate, with the result that the purchasing power of wages was less in each of these years than in 1911, the lowest point reached being in 1915, when the full time index-number was 14.6 per cent. less, or, allowing for unemployment, 18.7 per cent. less than for the base year. The first occasion on which the effective wage was higher than in 1911 was in 1921, when wages increased considerably while prices declined, the increase in effective wages being 7.6 per cent., but only 0.2 per cent. allowing for unemployment. Unemployment reached its " peak " during 1921. Both wages and prices fell in 1922, but the former less than the latter, resulting in a further increase in the effective wage. As wages remained practically stationary while prices rose, the effective wage for 1923 showed a decline. A rise in wages coincided with a fall in prices during 1924 and the effective wage increased, but as the average unemployment was higher than in the preceding year the increase in the effective wage was greater for full work than allowing for unemployment. Wages and prices both rose during 1925, the latter reaching their highest point since the " peak " of 1920. Unemployment remained stationary, but as prices rose more rapidly than the rise in nominal wages, effective wages decreased. In 1925 the effective wage allowing for unemployment was 3.3 per cent., and working full time 8.1 per cent., higher than in 1911.

§ 3. Changes in Rates of Wage.

1. **General.**—A change in rate of wages is defined as a change in the weekly rates of remuneration of a certain class of employees, apart from any change in the nature of the work performed and apart from any revision of rates due to increased length of service or experience. It is obvious that under this definition certain classes of changes are excluded, such, for example, as (*a*) changes in rates of pay due to promotion, progressive increments, or, on the other hand, to reduction in pay or grade to inefficient workers, and (*b*) changes in average earnings in an occupation due to a change in the proportions which more highly-paid classes of workers bear to those paid at lower rates. Bonuses to employees have not been taken into account in the tabulations. Each single change recorded relates to a change in the rates of wage effected in a specific industry or calling, and includes any and all changes to workers in that industry, irrespective of the different number of separate occupations or trades affected. Moreover, in some instances a change may relate to the employees of a single employer or to those of a number of employers, according to the instrument or method operating to bring about the change.

There is a certain amount of overstatement as regards " persons affected," since in the quarterly adjustments of wages the same persons may figure on four occasions. The difficulty of eliminating this factor has, however, been found too great to justify the labour involved. A further complication also arises from the overlapping of Commonwealth and State awards.

2. **Effect of Changes.**—(i) *General.* The following tables give particulars of changes which occurred in each State during the years specified. As regards the number of persons affected, the figures refer to the total number of persons ordinarily engaged in the various industries, and the results as to the amount of increase in wages are computed for a full week's work for all persons ordinarily engaged in the several industries and occupations affected. In cases of changes in existing minimum rates under awards or determinations of industrial tribunals, it has been assumed (in the absence of any definite information to the contrary) that the whole of the employees in each occupation received the minimum rates of wage before and after the change.

The figures given in regard to the amount of increase per week do not relate to the increase each week, but only to the increase in a single week on the assumption that the full number of persons ordinarily engaged in the particular trade or occupation affected by the change were employed during that week. It is obvious, therefore, that the aggregate effect per annum cannot be obtained without making due allowance for unemployment and for occupations in which unemployment is seasonal or intermittent. It is also clear that since unemployment and activity in all branches of industry may vary from year to year, and in many branches from season to season also, no accurate estimate of the actual effect of the changes in the total amount of wages received or paid per annum can be made until the determining factors have been investigated. These factors are (*a*) the amount of unemployment, and (*b*) the period of employment in seasonal industries.

Changes brought about by awards and agreements under the Commonwealth Conciliation and Arbitration Act, the Arbitration (Public Service) Act, and the Industrial Peace Act, 1920, are necessarily included hereunder as changes in each State to which such awards and agreements apply. The average increase per head per week is computed to the nearest penny.

(ii) *Summary—States, 1925.* During the year 1925 the number of increases in rates of wage recorded was in excess of the decreases.

CHANGES IN RATES OF WAGE.—EFFECT IN EACH STATE, 1925.

State.	Increases.		Decreases.		Total Result of all Changes.		
	Work-people Affected.	Increase per Week.	Work-people Affected.	Decrease per Week.	Work people Affected.	Net Increase per Week.	Average Increase per Week.
		£		£		£	s. d.
New South Wales ..	493,080	41,751	21,043	971	514,123	40,780	1 7
Victoria	271,642	27,146	71,482	7,178	343,123	19,968	1 2
Queensland	180,940	44,126	3,655	151	184,595	43,975	4 9
South Australia ..	84,334	11,530	29,387	1,837	113,721	9,693	1 8
Western Australia ..	36,276	3,398	3,876	199	40,152	3,199	1 7
Tasmania	10,604	675	7,962	382	18,566	292	0 4
Northern Territory ..	16	..	10	9	26	(a) 9	(a) 6 11
Federal Capital Territory	243	133	..	..	243	133	10 11
Common to all States (b)	46,960	1,461	700	66	47,660	1,395	0 7
Total	1,124,095	130,220	138,114	10,793	1,262,209	119,427	1 11

(a) Decrease. (b) See footnote (a) at bottom of page.

The preceding figures for changes in wages include all those which have occurred either through the operations of wage tribunals or as the result of direct negotiations between employers and employees. Many workers in all States come under the jurisdiction of awards made by the Federal Arbitration Court. The principle of quarterly adjustments adopted by that Court led to variations in all States during the year.

(iii) *Australia, 1921 to 1925.* The following table gives separate particulars of the effect of increases and decreases in rates of wage in Australia during the years 1921 to 1925 :—

CHANGES IN RATES OF WAGE.—EFFECT IN AUSTRALIA, 1921 TO 1925.

Year.	Increases.		Decreases.		Total Result of all Changes.		
	Work-people Affected.	Increase per Week.	Work-people Affected.	Decrease per Week.	Work-people Affected.	Net Increase per Week.	Average Increase per Head per Week.
		£		£		£	s. d.
1921	605,295	205,086	126,970	19,428	732,265	185,658	5 1
1922	156,017	22,412	472,099	92,974	628,116	(a)70,562	(a) 2 3
1923	820,856	125,379	169,996	21,361	990,852	104,018	3 0
1924	337,823	85,616	509,832	44,250	847,655	41,366	1 0
1925	1,124,095	130,220	138,114	10,793	1,262,209	119,427	1 11

(a) Decrease.

CHANGES IN RATES OF WAGE.—EFFECT, 1921 TO 1925.

Particulars.		N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	F.C.T.	(a) All States.	Aust.
No. of Persons Affected	1921	272,782	238,084	115,722	44,696	22,695	14,783	..	..	23,503	732,265
	1922	363,909	90,172	78,791	35,722	18,547	16,038	..	337	24,600	628,116
	1923	519,440	276,094	30,051	63,209	32,057	25,918	71	1,002	43,010	990,852
	1924	196,066	338,761	52,975	111,261	40,598	26,144	35	30	81,785	847,655
	1925	514,123	343,123	184,595	113,721	40,152	18,566	36	243	47,660	1,262,209
		£	£	£	£	£	£	£	£	£	£
Total Net Amount of Increase per Week	1921	38,371	77,425	30,790	13,409	11,395	6,370	..	..	7,898	185,658
	1922	b42930	b6,625	b14,836	b2,687	b1,589	b,1701	..	b56	b138	b70,562
	1923	53,868	36,934	b2,177	9,784	b69	1,755	b20	298	3,645	104,018
	1924	7,860	7,312	13,993	7,835	1,879	1,335	15	1	1,136	41,366
	1925	40,780	19,968	43,975	9,693	3,199	293	b9	133	1,395	119,427
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Average Increase per Head per Week	1921	2 10	6 6	5 4	6 0	10 1	8 7	..	..	6 9	5 1
	1922	b2 4	b1 6	b3 9	b1 6	b1 9	b2 1	..	b3 4	b0 1	b2 3
	1923	2 9	2 8	b1 5	3 11	b0 1	1 4	b5 8	5 11	1 9	3 0
	1924	0 10	0 5	5 3	1 5	0 11	1 0	8 7	0 8	0 3	1 0
	1925	1 7	1 2	4 9	1 8	1 7	0 4	b6 11	10 11	0 7	1 11

(a) Changes recorded in this column are common to all States, as the particulars relating to the number of workpeople affected and the net amount of increase per week in each State were not ascertainable. (b) Decrease.

The relative positions of the States in regard to the number of workers affected in each year naturally depend largely on the magnitude of the different industries and callings in which changes took place.

(iv) *Industrial Groups—Australia. Workpeople affected by Changes.* In the following table particulars are given of the number of changes, the number of persons (males and females) affected, and the total amount of increase per week, classified according to Industrial Groups throughout Australia during the years 1921 to 1925 :—

CHANGES IN RATES OF WAGE.—INDUSTRIAL GROUPS, AUSTRALIA, 1921 TO 1925.

Particulars.		Industrial Groups.							
		I. Wood, Furniture, Timber, etc.	II. Engineering, Metal Works, etc.	III. Food, Drink, Tobacco, etc.	IV. Clothing, Hats, Boots, etc.	V. Books, Printing, etc.	VI. Other Manufacturing.	VII. Building.	VIII. Mines, Quarries, etc.
1921.									
Number of Persons affected	..	11,915	58,632	55,555	89,542	12,116	55,766	24,717	6,322
Amount of Increase per week	£	2,650	17,244	13,658	16,143	4,000	14,666	10,196	2,896
1922									
Number of Persons affected	..	14,824	68,844	34,987	13,793	13,533	64,285	48,603	17,716
Amount of Decrease per week	£	*b*2,028	*b*14,399	*b*5,805	*b*1,412	*b*1,722	*b*6,784	*b*8,069	*b*2,330
1923.									
Number of Persons affected	..	60,724	102,475	72,851	19,593	10,445	82,785	79,685	18,223
Amount of Increase per week	£	6,209	12,258	3,594	*b*333	1,021	9,144	13,034	828
1924.									
Number of Persons affected	..	62,728	79,067	43,685	55,155	8,803	78,843	66,596	12,100
Amount of Increase per week	£	*b*2,506	*b*2,270	2,713	4,103	4,246	*b*1,881	7,806	580
1925.									
Number of Persons affected	..	95,720	123,669	68,596	40,202	16,224	115,692	121,549	31,373
Amount of Increase per week	£	7,905	9,500	7,609	1,444	1,128	8,407	10,149	4,103

Particulars.		Industrial Groups—*continued.*						
		IX. Rail and Tram Services.	X. Other Land Transport.	XI. Shipping, etc.	XII. Pastoral, Agricultural, etc.	XIII. Domestic, Hotels, etc.	XIV. Miscellaneous.	ALL GROUPS.
1921.								
Number of Persons affected	..	127,860	24,885	37,904	1,815	17,904	207,332	732,265
Amount of Increase per week	£	18,573	2,717	17,986	853	4,339	59,737	185,658
1922.								
Number of Persons affected	..	86,161	12,603	28,432	56,292	15,663	152,380	628,116
Amount of Increase per week	£	*a*15,311	*a*2,075	*a*559	4,136	*a*1,288	*a*12,916	*a*70,562
1923.								
Number of Persons affected	..	155,830	23,510	79,466	24,720	21,724	238,821	990,852
Amount of Increase per week	£	11,990	237	6,873	9,647	3,117	26,399	104,018
1924.								
Number of Persons affected	..	86,961	43,343	94,110	13,989	7,607	194,668	847,655
Amount of Increase per week	£	6,544	1,555	*a*5,350	4,749	1,834	19,243	41,366
1925.								
Number of Persons affected	..	188,752	27,249	77,285	55,495	37,472	262,931	1,262,209
Amount of Increase per week	£	18,196	3,435	5,656	10,577	4,239	27,074	119,427

(*a*) Decrease.

(v) *Male and Female Occupations.* Included in the changes in rates of wage recorded in the table on page 524 are those which in the whole or part thereof affected female occupations. Particulars in respect of these changes in so far as they relate to the numbers of male and female workers affected, etc., are set out hereunder :—

CHANGES IN RATES OF WAGE.—EFFECT IN MALE AND FEMALE OCCUPATIONS, 1921 TO 1925.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	All States. (a)	Australia.
NUMBER OF MALE EMPLOYEES AFFECTED.										
1921	219,813	185,895	90,918	37,062	19,988	13,484	..	..	21,710	588,870
1922	322,813	85,005	64,473	34,085	18,248	14,473	..	337	24,600	564,034
1923	465,446	256,666	27,421	60,967	31,507	24,931	71	1,002	42,830	910,841
1924	181,779	295,591	38,271	95,743	37,185	24,100	35	30	76,994	749,728
1925	429,300	322,075	162,971	98,337	36,651	17,848	26	243	40,854	1,108,305
NET AMOUNT OF INCREASE PER WEEK TO MALE EMPLOYEES.										
	£	£	£	£	£	£	£	£	£	£
1921	26,735	68,087	26,649	12,079	10,737	6,119	..	..	6,891	157,297
1922	(b)40,245	(b)6,943	(b)13,965	(b)2,626	(b)1,640	(b)1,818	..	(b) 56	(b) 138	(b) 67,431
1923	50,954	33,902	(b) 2,290	9,270	(b) 123	1,893	(b) 20	298	3,654	97,538
1924	6,947	2,600	11,869	7,010	1,457	1,086	15	1	356	31,341
1925	37,480	18,448	41,893	8,748	2,767	293	(b) 9	133	1,213	110,966
AVERAGE INCREASE PER HEAD PER WEEK TO MALE EMPLOYEES.										
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1921	2 5	7 4	5 10	6 6	10 9	9 1	..	..	6 4	5 4
1922	(b) 2 6	(b)1 8	(b) 4 4	(b)1 6	(b)1 10	(b)2 6	..	(b)3 4	(b)0 1	(b) 2 5
1923	2 2	2 8	1 8	3 1	(b)0 1	1 6	(b)5 8	5 11	1 9	2 2
1924	0 9	0 2	6 2	1 6	0 9	0 11	8 7	0 8	0 1	0 10
1925	1 9	1 2	5 2	1 10	1 6	0 4	(b)6 11	10 11	0 7	2 0
NUMBER OF FEMALE EMPLOYEES AFFECTED.										
1921	52,969	52,189	24,804	7,634	2,707	1,299	..	..	1,793	143,395
1922	41,096	5,167	14,318	1,637	299	1,565	..	..	..	64,082
1923	53,994	19,428	2,630	2,242	550	987	..	..	180	80,011
1924	14,287	43,170	14,704	15,518	3,413	2,044	..	..	4,791	97,927
1925	84,823	21,048	21,624	15,384	3,501	718	..	..	6,806	153,904
NET AMOUNT OF INCREASE PER WEEK TO FEMALE EMPLOYEES.										
	£	£	£	£	£	£	£	£	£	£
1921	11,636	9,338	4,141	1,330	658	251	..	..	1,007	28,361
1922	(b) 2,685	318	(b) 871	(b) 61	51	117	..	..	..	(b) 3,131
1923	2,914	3,032	113	514	54	(b) 138	..	..	(b) 9	6,480
1924	913	4,712	2,124	825	422	249	..	..	780	10,025
1925	3,300	1,520	2,082	945	432	..	..	..	182	8,461
AVERAGE INCREASE PER HEAD PER WEEK TO FEMALE EMPLOYEES.										
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1921	4 5	3 7	3 4	3 6	4 10	3 10	..	..	11 3	3 11
1922	(b) 1 4	1 3	(b) 1 4	(b)0 9	3 5	1 6	..	..	..	(b) 1 0
1923	1 1	3 2	0 10	4 7	2 0	(b) 0 3	..	..	(b)1 0	1 8
1924	1 3	2 2	2 11	1 1	2 6	2 5	..	..	3 3	2 1
1925	0 9	1 5	1 11	1 3	2 6	..	0 6	..	..	1 1

(*a*) Changes recorded in this column are common to all States, as the particulars relating to the number of workpeople affected and the net amount of increase per week in each State were not ascertainable. (*b*) Decrease.

3. Methods by which Changes were Effected, and Results.—(i) *Summary, Australia, 1925.* The following table gives for Australia the number of workpeople affected, and the total net amount of increase in the weekly wage distribution brought about either without, or after, stoppage of work during the year 1925, as a result of the application of one or other of the methods set out in the tables :—

CHANGES IN RATES OF WAGE.—METHODS AND RESULTS, AUSTRALIA, 1925.

Methods by which Changes were Effected.	Without Stoppage of Work.		After Stoppage of Work.		All Changes.	
	No. of Workpeople Affected.	Total Net Amount of Increase per Week.	No. of Workpeople Affected.	Total Net Amount of Increase per Week.	No. of Workpeople Affected.	Total Net Amount of Increase per Week.
		£		£		£
By direct negotiations	15,001	1,775	109	105	15,110	1,880
By negotiations, intervention or assistance of third party	23,317	1,959	..	..	23,317	1,959
By award of Court under Commonwealth Act	581,291	29,991	15	5	581,306	29,996
By agreement registered under Commonwealth Act	64,849	4,524	..	..	64,849	4,524
By award or determination under State Acts	547,986	80,322	..	..	547,986	80,322
By agreement registered under State Acts	29,641	746	..	..	29,641	746
TOTAL	1,262,085	119,317	124	110	1,262,209	119,427

(ii) *Summary, Australia, 1921 to 1925.* So far as possible, the effect of awards or agreements is recorded in the figures for the year in which such awards or agreements are made and filed. In certain cases, however, the awards or agreements are made retrospective as to the date on which the altered rate of wage has to be paid, and in others the particulars as to the number of workpeople affected and the effect of the change are difficult to ascertain.

CHANGES IN RATES OF WAGE.—METHODS AND RESULTS, AUSTRALIA, 1921 TO 1925.

Particulars.	By Voluntary Action of Employers.	By Direct Negotiations.	By Negotiations, Intervention or Assistance of Third Party.	By Award of Court under C'wealth Act.	By Agreement Registered under C'wealth Act.	By Award or Determination under State Act.	By Agreement Registered under State Act.	TOTAL.
1921.								
Number of Workpeople affected	2,000	77,210	73,704	139,773	24,166	391,215	24,197	732,265
Amount of Increase per week £	565	20,711	26,286	44,360	12,209	76,814	4,713	185,658
1922.								
Number of Workpeople affected	..	7,186	54,878	125,195	43,002	376,994	20,861	628,116
Amount of Increase per week £	..	1,905	5,122	*a* 12,307	*a* 4,242	*a* 58,266	*a*2,774	*a* 70,562
1923.								
Number of Workpeople affected	..	18,605	52 298	334,180	46,974	503,722	35,073	990,852
Amount of Increase per week £	..	2,488	1,124	46,438	6,633	42,614	4,721	104,018
1924.								
Number of Workpeople affected	..	1,939	65,653	521,469	34,401	205,615	18,578	847,655
Amount of Increase per week £	..	654	14,627	*a* 14,636	*a* 51	31,668	9,104	41,366
1925.								
Number of Workpeople affected	..	15,110	23,317	581 306	64,849	547,986	29,641	1,262,209
Amount of Increase per week £	..	1,880	1,959	29,996	4,524	80,322	746	119,427

(*a*) Decrease.

C. EMPLOYMENT.

§ 1. Industrial Disputes.

1. **General.**—Information with regard to the collection of particulars and methods of tabulation of industrial disputes involving stoppage of work has appeared in previous issues of the Year Book, and is also given in the annual Reports of the Labour and Industrial Branch of this Bureau.

In *annual** tabulations, particulars are included of all disputes which either *commenced* or were *current* during the year under review. As regards "number of disputes," and "number of establishments involved," therefore, duplication will take place in respect of those disputes which started in and were uncompleted at the end of a preceding year; the number involved will, however, be indicated in a footnote, to permit of due allowance being made therefor in any calculations made from the tables.

2. **Industrial Disputes Involving Stoppage of Work, Classified in Industrial Groups, 1925.**—The following tables give particulars of industrial disputes which either commenced or were current during the year 1925, classified according to industrial groups. Similar information for the years 1913 to 1924 was published in Labour Reports Nos. 5 to 15.

INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO INDUSTRIAL GROUPS, 1925.

Class.	Industrial Group.	No. of Disputes.	No. of Estab. Involved.	No. of Workpeople Involved.			No. of Working Days Lost.	Estimated Loss in Wages.
				Directly.	Indirectly.	Total.		
	NEW SOUTH WALES.							£
II.	Engineering, metal works, etc.	13	13	1,964	306	2,270	21,282	17,173
III.	Food, drink, etc., manufacturing and distribution	3	10	247	12	259	381	361
IV.	Clothing, hats, boots, etc. ..	1	1	25	..	25	38	25
VI.	Other manufacturing ..	3	3	1,228	43	1,271	12,292	6,711
VII.	Building	2	2	203	..	203	630	480
VIII.	Mines, quarries, etc.	384	384	117,527	14,958	132,485	562,428	673,018
IX.	Railway and tramway services	3	3	134	500	634	1,227	1,081
XI.	Shipping, wharf labour, etc. ..	7	20	1,097	886	1,983	43,835	31,649
XII.	Pastoral, agricultural, etc. ..	4	4	56	29	85	245	388
XIV.	Miscellaneous	10	18	811	203	1,014	7,482	5,715
	Total	(*a*)430	458	123,292	16,937	140,229	649,840	736,601
	VICTORIA.							
II.	Engineering, metal works, etc.	3	3	295	1,668	1,963	61,738	72,963
III.	Food, drink, etc.	3	9	620	..	620	4,920	2,505
IV.	Clothing, hats, boots, etc. ..	1	1	29	7	36	180	231
VI.	Other manufacturing ..	1	3	204	..	204	3,108	2,214
VII.	Building	3	121	536	260	796	21,806	23,602
VIII.	Mines, quarries, etc.	2	2	1,830	..	1,830	1,856	2,196
XI.	Shipping, wharf labour, etc. ..	2	15	785	693	1,478	28,914	20,240
XIII.	Domestic, hotels, etc. ..	1	1	84	..	84	252	86
XIV.	Miscellaneous	3	3	1,045	544	1,589	8,963	6,780
	Total	19	158	5,428	3,172	8,600	131,737	130,817

(*a*) Four disputes in New South Wales (involving 4 establishments and 587 workers), commenced in 1924.

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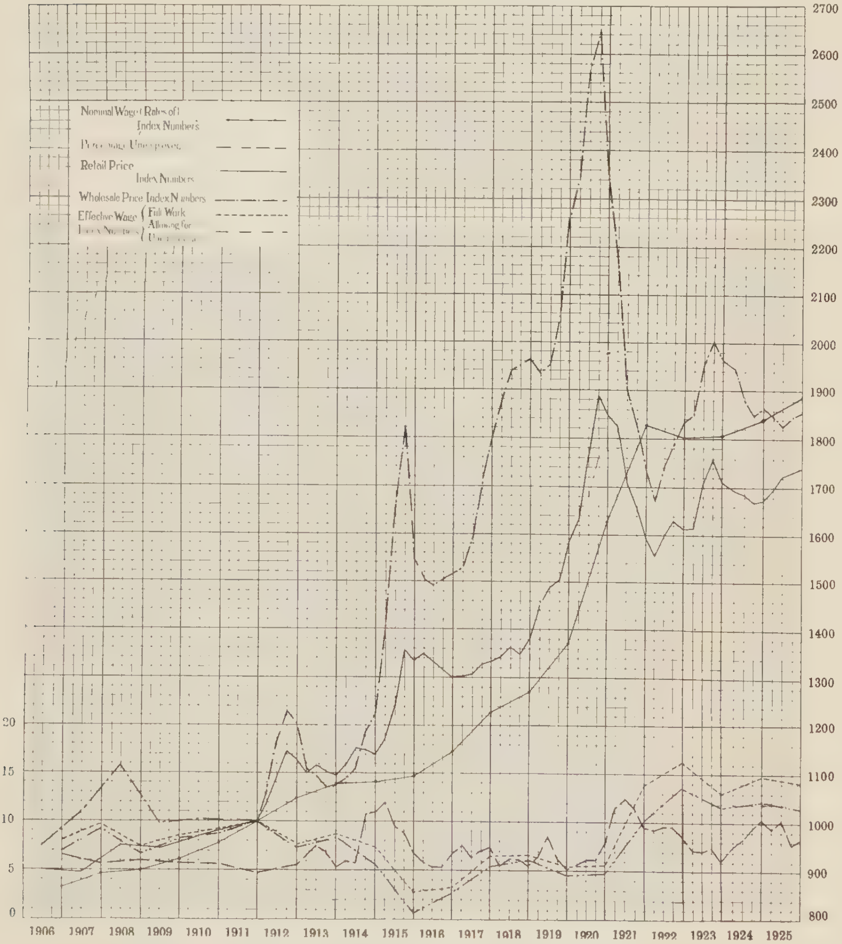
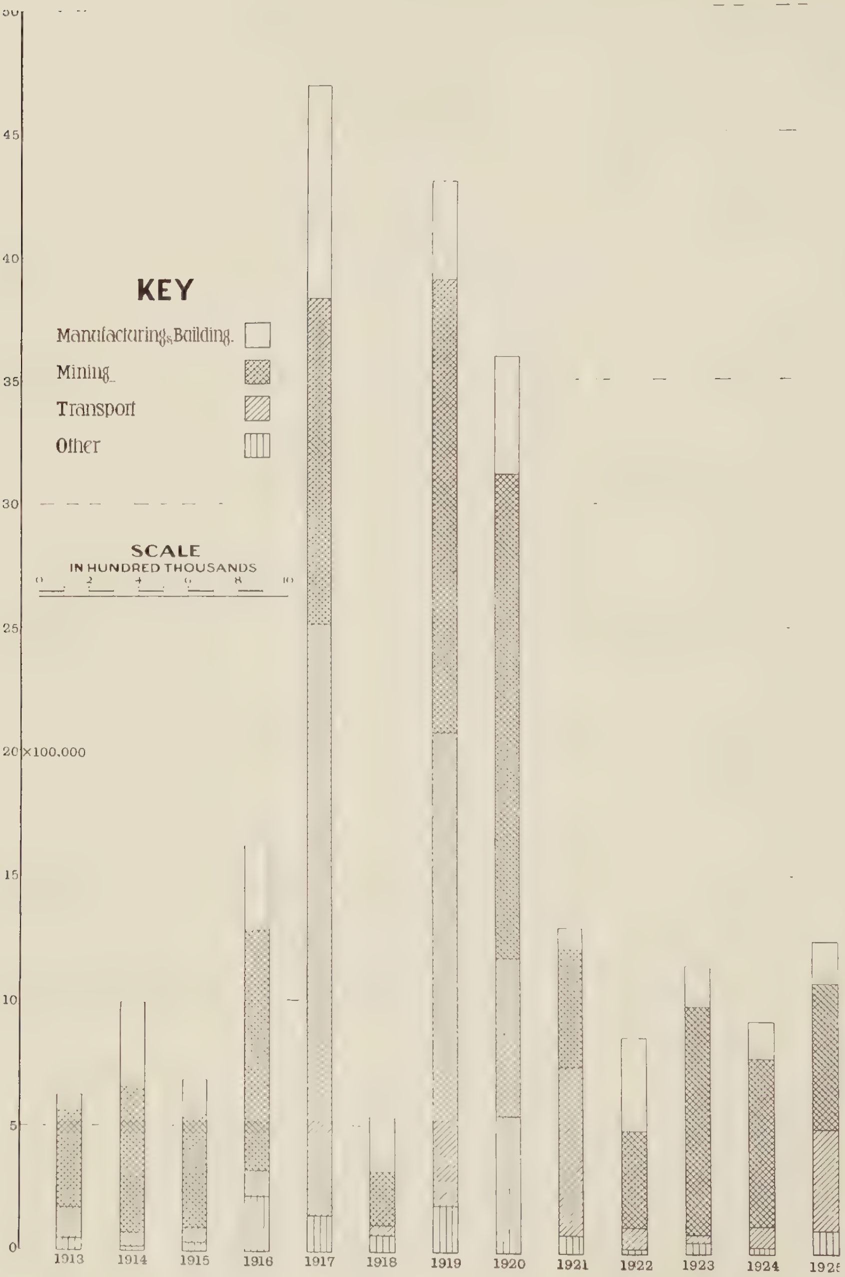
* In respect of years prior to 1922, the figures include complete particulars of industrial disputes which *commenced* during any calendar year; and where any such dispute extended into a subsequent year, the relative figures were also incorporated in those for the year in which the dispute commenced.

RETAIL AND WHOLESALE PRICES, NOMINAL AND EFFECTIVE WAGE INDEX-NUMBERS, AND PERCENTAGE OF UNEMPLOYED.—AUSTRALIA, 1906 TO 1925.



NOTE.—The figures on the left represent the scale for the percentage unemployed according to trade-union returns. The figures on the right represent the scale for the several index-numbers, the year 1911 being taken in each case as base (= 1000). Since the end of the year 1911, the Retail Price Index-numbers (weighted average cost of food, groceries, and house rent for the six capital cities), and the Wholesale Price Index number (Melbourne) are shown in each quarter, while unemployment percentages are shown quarterly since the end of the year 1912 only. The other index-numbers since 1913 refer to the average for the whole year, but for purposes of convenience are plotted on the graph as at the end, not the middle, of the year. Retail Price and Wholesale Price Index-numbers show the average level during the whole of each quarter, and they also for convenience are plotted at the end, and not the middle, of each quarter.

INDUSTRIAL DISPUTES.—WORKING DAYS LOST IN INDUSTRIAL GROUPS, AUSTRALIA, 1913 TO 1925.



EXPLANATION.—The scale refers to working days lost in hundred thousands. Thus, taking the year 1917, and comparing the shaded and blank sections with the scale, it will be observed that about 870,000 working days were lost in Manufacturing and Building, over 1,300,000 in Mining, over 2,300,000 in Transport, and about 150,000 in other industries.

INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO INDUSTRIAL GROUPS, 1925—*continued.*

Class.	Industrial Group.	No. of Disputes.	No. of Estab. Involved.	No. of Workpeople Involved.			No. of Working Days Lost.	Estimated Loss in Wages.
				Directly.	Indirectly.	Total.		
	QUEENSLAND.							
II.	Engineering, metal works, etc.	3	3	63	..	63	650	526
III.	Food, drink, etc.	3	3	563	580	1,143	21,044	19,685
VII.	Building	4	4	166	14	180	1,583	1,349
VIII.	Mines, quarries, etc. ..	3	3	251	7	258	8,616	8,632
IX.	Railway and tramway services	2	2	17,557	..	17,557	122,904	123,972
XI.	Shipping, wharf labour ,etc. ..	7	49	1,832	239	2,071	65,029	10,316
	Total	22	64	20,432	840	21,272	219,826	164,480
	SOUTH AUSTRALIA.							
II.	Engineering, metal works, etc.	1	1	13	6	19	893	650
III.	Food, drink, etc.	1	1	355	..	355	2,485	1,000
VII.	Building	3	3	169	50	219	5,268	3,314
VIII.	Mines, quarries, etc. ..	1	1	196	..	196	392	301
XI.	Shipping, wharf labour, etc. ..	3	16	340	225	565	10,352	6,958
XIV.	Miscellaneous	2	2	45	..	45	73	17
	Total	11	24	1,118	281	1,399	19,463	12,240
	WESTERN AUSTRALIA.							
I.	Wood, sawmill, timber, etc. ..	1	1	70	..	70	515	420
VI.	Other manufacturing ..	1	1	32	..	32	192	160
VII.	Building	1	8	137	100	237	8,058	6,598
VIII.	Mines, quarries, etc. ..	1	2	80	560	640	3,840	4,608
IX.	Railway and tramway services	1	1	195	..	195	2,145	2 000
XI.	Shipping, wharf labour, etc. ..	3	16	304	148	452	14,110	11,275
XIII.	Domestic, hotels, etc. ..	1	150	2,500	..	2,500	70,000	31,250
XIV.	Miscellaneous	1	1	3	6	9	81	47
	Total	10	180	3,321	814	4,135	98,941	56,358
	TASMANIA.							
III.	Food, drink, etc.	1	1	90	..	90	90	270
XI.	Shipping, wharf labour, etc. ..	2	15	79	70	149	2,899	2,030
	Total	3	16	169	70	239	2,989	2,300
	NORTHERN TERRITORY.							
VII.	Building	1	1	16	..	16	39	39
	Total	1	1	16	..	16	39	39
	FEDERAL CAPITAL TERRITORY.							
VII.	Building	1	2	231	..	231	231	292
XIV.	Miscellaneous	2	3	592	33	625	5,504	4,417
	Total	3	5	823	33	856	5,735	4,709
	ALL STATES.							
I.	Wood, sawmill, timber, etc. ..	1	1	70	..	70	515	420
II.	Engineering, metal works, etc.	20	20	2,335	1,980	4,315	84,563	91,312
III.	Food, drink, etc., manufacturing and distribution	11	24	1,875	592	2,467	28,920	23,821
IV.	Clothing, hats, boots, etc. ..	2	2	54	7	61	218	256
VI.	Other manufacturing ..	5	7	1,464	43	1,507	15,592	9,085
VII.	Building	15	141	1,458	424	1,882	37,615	35,674
VIII.	Mines, quarries, etc. ..	391	392	119,884	15,525	135,409	577,132	688,755
IX.	Railway and tramway services	6	6	17,886	500	18,386	126,276	127,053
XI.	Shipping, wharf labour, etc. ..	24	131	4,437	2,261	6,698	165,139	82,468
XII.	Pastoral, agricultural, etc. ..	4	4	56	29	85	245	388
XIII.	Domestic, hotels, etc. ..	2	151	2,584	..	2,584	70,252	31,336
XIV.	Miscellaneous	18	27	2,496	786	3,282	22,103	16,976
	Total Australia (*a*) ..	499	906	154,599	22,147	176,746	1,128,570	1,107,544

(*a*) See note (*a*) to table on page 528.

3. Industrial Disputes,* Australia, 1921 to 1925.—The following table gives particulars of the number of industrial disputes, the number of workpeople involved, and the losses in working days and wages caused by disputes which either commenced or were current during each *calendar* year 1921 to 1925, classified according to industrial groups :—

INDUSTRIAL DISPUTES.—AUSTRALIA, 1921 TO 1925.*

Calendar Year.	Manufacturing. (Groups I. to VI.)	Building. (Group VII.)	Mining. (Group VIII.)	Transport, Land and Sea. (Groups IX. to XI.)	Miscellaneous. (Groups XII. to XIV.)	ALL GROUPS.
			NUMBER OF DISPUTES.			
1921 ..	30	9	509	46	30	624
1922 ..	69	4	307	45	20	445
1923 ..	44	8	171	28	23	274
1924 ..	31	15	410	23	25	504
1925 ..	39	15	391	30	24	(*a*) 499
1921 to 1925 ..	213	51	1,788	172	122	2,346
			NUMBER OF WORKPEOPLE INVOLVED.			
1921 ..	3,161	1,421	133,547	22,694	4,278	165,101
1922 ..	15,215	287	96,151	2,882	1,797	116,332
1923 ..	9,884	577	58,043	2,257	5,560	76,321
1924 ..	6,899	2,753	133,876	5,631	3,287	152,446
1925 ..	8,420	1,882	135,409	25,084	5,951	176,746
1921 to 1925 ..	43,579	6,920	557,026	58,548	20,873	686,946
			NUMBER OF WORKING DAYS LOST.			
1921 ..	47,385	36,406	467,867	666,517	68,010	1,286,185
1922 ..	366,134	3,720	383,414	85,693	19,724	858,685
1923 ..	153,053	6,886	907,767	32,609	45,662	1,145,977
1924 ..	116,427	28,204	662,257	85,479	26,279	918,646
1925 ..	129,808	37,615	577,132	291,415	92,600	1,128,570
1921 to 1925 ..	812,807	112,831	2,998,437	1,161,713	252,275	5,338,063
			ESTIMATED LOSS IN WAGES.			
	£	£	£	£	£	£
1921 ..	39,416	24,719	459,450	397,169	49,721	970,475
1922 ..	242,159	3,280	427,363	64,597	14,108	751,507
1923 ..	120,127	6,284	1,086,904	29,580	32,611	1,275,906
1924 ..	80,746	21,359	735,572	61,823	18,199	917,699
1925 ..	124,894	35,674	688,755	209,521	48,700	1,107,544
1921 to 1925 ..	607,342	91,316	3,398,044	762,690	163,339	5,022,731

(*a*) See footnote (*a*), page 528.

4. Summary of Disputes (involving Stoppage of Work), 1921 to 1925.—The following table gives particulars of the number of industrial disputes in each State in various years from 1921 to 1925, together with the number of workpeople involved, the number of working days lost, and the total estimated loss in wages.

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* This table shows the full effect of all disputes which either occurred or were current during each calendar year, and the footnote * on page 528 does not, therefore, apply.

INDUSTRIAL DISPUTES.—SUMMARY, 1921 TO 1925.(*a*)

State or Territory.	Year.	No. of Disputes.	Establishments Involved in Disputes.	No. of Workpeople Involved.			No. of Working Days Lost.	Total Estimated Loss in Wages.
				Directly.	Indirectly.	Total.		
								£
New South Wales ..	1921	535	567	108,573	29,921	138,494	547,838	493,267
	1922	342	657	88,257	14,042	102,299	586,520	579,491
	1923	200	601	54,809	5,390	60,199	892,306	1,038,519
	1924	416	584	116,087	17,648	133,735	706,796	755,142
	1925	(*b*) 430	458	123,292	16,937	140,229	649,840	736,601
Victoria	1921	20	118	4,119	2,161	6,280	109,595	69,629
	1922	29	412	5,819	311	6,130	64,701	47,695
	1923	29	133	6,279	771	7,050	98,880	108,512
	1924	30	36	9,621	416	10,037	66,567	50,735
	1925	19	158	5,428	3,172	8,600	131,737	130,817
Queensland ..	1921	33	97	3,367	1,512	4,879	95,560	69,793
	1922	38	49	2,611	620	3,231	36,730	32,589
	1923	25	36	2,724	340	3,064	55,131	53,081
	1924	25	30	2,889	246	3,135	47,214	42,018
	1925	22	64	20,432	840	21,272	219,826	164,480
South Australia ..	1921	19	45	2,158	1,002	3,160	57,038	37,315
	1922	19	229	2,294	929	3,223	114,334	43,222
	1923	10	23	806	975	1,781	25,971	20,440
	1924	14	52	1,546	147	1,693	19,459	14,851
	1925	11	24	1,118	281	1,399	19,463	12,240
Western Australia ..	1921	12	56	1,906	10,157	12,063	145,103	86,038
	1922	8	91	643	163	806	43,472	38,208
	1923	6	88	1,255	2,752	4,007	72,274	53,408
	1924	13	233	2,131	1,366	3,497	66,734	42.329
	1925	10	180	3,321	814	4,135	98,941	56,358
Tasmania	1921	5	5	75	150	225	1,483	986
	1922	5	5	382	4	386	9,284	7,497
	1923	3	3	197	..	197	1,093	1,296
	1924	5	5	268	54	322	11,606	12,268
	1925	3	16	169	70	239	2,989	2,300
Fed. Cap. Territory	1922	2	2	217	..	217	2,604	2,035
	1923	1	1	23	..	23	322	250
	1925	3	5	823	33	856	5,735	4,709
Northern Territory	1921	..	..	..	..	..	..	..
	1922	2	2	40	..	40	1,040	770
	1923	..	..	..	..	..	..	..
	1924	1	1	27	..	27	270	356
	1925	1	1	16	..	16	39	39
Australia	1921	624	888	120,198	44,903	165,101	956,617	757,028
	1922	445	1,447	100,263	16,069	116,332	858,685	751,507
	1923	274	885	66,093	10,228	76,321	1,145,977	1,275,506
	1924	504	941	132,569	19,877	152,446	918,646	917,699
	1925	(*b*) 499	906	154,599	22,147	176,746	1,128,570	1,107,544

(*a*) See footnote *, page 528. (*b*) See footnote (*a*), page 528.

Detailed information in regard to the disputes during these and previous years is given in the Labour Reports issued by this Bureau.

The figures given in the tables show that of the total number of disputes (499) which occurred in 1925 no less than 391 occurred in connexion with the mining industry, and of these 384 occurred in New South Wales. The total loss in wages through all disputes in Australia was £1,107,544. The loss through disputes in the coal-mining industry in New South Wales was £673,018, or more than half the total loss in wages for Australia.

(i) *New South Wales.*—The following are some of the principal disputes which occurred in the coal-mining industry in this State:—Aberdare Central (objection to a certain employee), Abermain No. 2 (improvement in working conditions), Pelaw Main (non-employment of four wheelers on a certain day), Richmond Main (sympathy with employees at Pelaw Main), Ayrfield (dispute as to kind of explosives supplied), South Bulli (ceased work because of arrest of seven employees for non-payment of fines imposed by Civil Court), Seaham No. 2 (refusal of two employees to pay levy to *Labor Daily*), Abermain No. 1 (temporary dismissal of two machinemen because of breakdown), South Bulli (refusal of work on certain extension, endorsed by employees who ceased work), Stockton Borehole and Stanford Merthyr (dispute as to kind of safety lamps), Pelaw Main (dispute as to rate paid to a wheeler). The disputes in other industries (apart from shipping, which is referred to later) were unimportant in respect to time or wages lost.

(ii) *Victoria.*—The principal disputes in this State, apart from shipping disputes, occurred in connexion with the Engineering and Building trades. The engineers at the State Coal Mine at Wonthaggi ceased work on the refusal of the management to grant the demands made in a new log of wages and conditions. This affected not only the engineers but also the miners. The dispute was finally settled by the Coal Tribunal functioning under the provisions of the Industrial Peace Act. In the building trades a cessation of work occurred in consequence of the refusal by bricklayers and plasterers to accept reductions in wages. The wages being paid and those suggested were both above award rates.

(iii) *Queensland.*—The principal disputes were—Babinda Sugar Mill (demand of employees that at least 75 per cent. of the cane cutters should be British); Railway Employees (restoration of a 5 per cent. reduction in wages made in 1922). This dispute was settled by the Government granting an increase of 5s. per week. Waterside Workers (attempt to enforce " rotary " system of employing waterside workers).

(iv) *South Australia.*—A stoppage of work occurred in connexion with the Government's " Thousand Homes Scheme " owing to the dismissal of a foreman plasterer on the ground of incompetence.

(v) *Western Australia.*—Two important disputes occurred in this State, that of Hotel, Club, and Restaurant employees in reference to the operation of the preference clause in the agreement, and that of Timber Mill employees in Perth for the 44 hours week.

(vi) *Tasmania.*—The disputes in this State numbered only three and were of minor importance.

(vii) *Shipping.*—Two important disputes occurred in this industry. The first commenced at the end of 1924 and had reference to the place where members of the union should be engaged by the representatives of the shipowners. The practice up to this time had been for the seamen to be " picked up " at the ship's side. The union demanded that the engagement should be made at the Union's office. Upon the matter coming before the Commonwealth Arbitration Court the President fixed the Mercantile Marine Office in each of the capital cities as the " picking up " place.

The second dispute arose after the deregistration of the Seamen's Union by the Commonwealth Arbitration Court.

The union demanded that the rates of wages and conditions provided under the Award of the Commonwealth Court should be included in the articles of each member of the Union engaged. After negotiations by the parties the employers consented to do this, subject to certain modifications upon the officials of the Union agreeing not to exercise job control in the future.

A strike of British seamen occurred about the middle of the year which, however, had only an indirect effect on Australian workers. As the tabulations of the Bureau refer to purely Australian disputes, no account of this strike has been taken, either directly or indirectly.

It is, of course, obvious that the mere number of disputes cannot by itself be accepted as a proper basis of comparison, nor does the number of workpeople afford a satisfactory basis. A better idea as to the significance and effect of industrial disputes may be obtained from the number of working days lost and the estimated loss in wages.

The position which New South Wales occupies in comparison with the other States is almost entirely due to the prevalence of disputes in connexion with coal-mining, and attention has frequently been drawn to the preponderating influence exercised by these disputes on the total number of industrial disputes. In making any comparison as to the number of disputes in this industrial class in each State, it should be observed that the number of workers engaged in the mining industry is very much larger in New South Wales than in any of the other States.

Apart from these stoppages, the number of disputes in all other industries, whilst still in excess of that for each of the other States, does not compare unfavourably if the number of workpeople in each State is taken into consideration.

In regard to extensive dislocations of industry prior to the institution of systematic inquiries by this Bureau, efforts were made to obtain statistical data relating to the shearers' disputes in 1890, 1891, and 1894, and the maritime dispute in the early part of 1891, but precise information was not obtainable.

5. **Duration of Industrial Disputes, 1925.**—The following table gives particulars respecting the number of disputes, workpeople directly and indirectly involved, working days lost, and estimated amount of loss in wages respectively, consequent on the cessations of work recorded for Australia during the year 1925, classified under the adopted limits of duration :—

INDUSTRIAL DISPUTES.—DURATION, AUSTRALIA, 1925.(*a*)

Limits of Duration.	No. of Disputes.	No. of Workpeople Involved.			Number of Working Days Lost.	Total Estimated Loss in Wages.
		Directly.	Indirectly.	Total.		
						£
1 day and less	218	65,918	8,505	74,423	73,790	88,819
2 days and more than 1 day	66	20,156	4,160	24,316	47,223	55,605
3 days and more than 2 days	29	8,615	578	9,193	27,298	30,877
Over 3 days and less than 1 week (6 days)	41	10,648	1,322	11,970	52,614	62,353
1 week and less than 2 weeks	59	28,541	2,040	30,581	227,314	232,731
2 weeks and less than 4 weeks	35	8,032	1,051	9,083	150,598	163,305
4 weeks and less than 8 weeks	28	8,130	2,745	10,875	322,294	303,077
8 weeks and over ..	23	4,559	1,746	6,305	227,439	170,777
Total	*a* 499	154,599	22,147	176,746	1,128,570	1,107,544

(*a*) See footnote (*a*) on page 528.

Similar figures for the years 1913 to 1924 will be found in previous issues of the Year Book and in the Labour Reports.

6. Causes of Industrial Disputes, 1914 to 1925 (*a*).—The following table shows the number of disputes, number of workpeople involved, and the total number of working days lost in disputes during the years 1914 and 1920 to 1925, classified according to principal cause :—

INDUSTRIAL DISPUTES.—CAUSES, AUSTRALIA, 1914 TO 1925.(*b*)

Causes of Dispute.	1914.	1920.	1921.	1922.	1923.	1924.	1925.(*b*)
			NUMBER OF DISPUTES.				
1. **Wages**—							
(*a*) For increase ..	50	94	19	15	35	44	33
(*b*) Against decrease ..	3	..	2	18	4	7	5
(*c*) Other wage questions	67	106	161	83	37	95	99
2. **Hours of Labour**—							
(*a*) For reduction ..	1	16	12	12	10	2	4
(*b*) Other disputes re hours	13	9	16	2	2	4	6
3. **Trades Unionism**—							
(*a*) Against employment of non-unionists ..	13	20	5	6	4	6	8
(*b*) Other union questions	11	27	22	15	11	31	27
4. **Employment of particular Classes or Persons** ..	83	135	169	155	68	137	118
5. **Working Conditions** ..	72	106	162	89	57	111	106
6. **Sympathetic**	3	2	13	8	9	8	16
7. **Other Causes**	21	39	43	42	37	59	77
Total	337	554	624	445	274	504	499(*b*)
			NUMBER OF WORKPEOPLE INVOLVED.				
1. **Wages**—							
(*a*) For increase ..	7,362	41,748	2,659	843	9,816	8,312	23,443
(*b*) Against decrease ..	534	..	850	4,432	174	1,113	1,123
(*c*) Other wage questions	15,243	21,139	52,704	24,459	8,696	30,585	31,387
2. **Hours of Labour**—							
(*a*) For reduction ..	220	20,758	2,313	5,935	6,488	1,328	462
(*b*) Other disputes re hours	3,237	2,137	2,113	124	485	1,172	2,668
3. **Trades Unionism**—							
(*a*) Against employment of non-unionists ..	5,807	2,752	1,353	1,072	473	1,005	1,592
(*b*) Other union questions	1,593	7,534	6,607	4,264	2,310	12,078	10,957
4. **Employment of particular Classes or Persons** ..	14,863	26,163	45,408	36,194	11,269	39,839	36,075
5. **Working Conditions** ..	17,053	21,204	35,790	27,334	15,605	36,630	35,034
6. **Sympathetic**	675	1,397	3,251	1,119	875	436	5,328
7. **Other Causes**	4,462	10,734	12,053	10,556	20,130	19,948	28,677
Total	71,049	155,566	165,101	116,332	76,321	152,446	176,746
			NUMBER OF WORKING DAYS LOST.				
1. **Wages**—							
(*a*) For increase ..	99,451	793,935	13,731	8,694	64,493	120,317	209,356
(*b*) Against decrease ..	32,965	..	25,700	154,791	1,012	13,553	24,352
(*c*) Other wage questions	169,847	101,219	192,858	149,129	81,749	111,613	154,169
2. **Hours of Labour**—							
(*a*) For reduction ..	9,240	534,458	13,315	164,794	101,807	130,440	12,816
(*b*) Other disputes re hours	16,855	37,486	13,260	1,701	36,092	42,441	16,173
3. **Trades Unionism**—							
(*a*) Against employment of non-unionists ..	92,720	24,900	17,890	5,485	784	2,555	14,784
(*b*) Other union questions	6,968	21,999	117,199	18,976	17,743	40,046	105,195
4. **Employment of particular Classes or Persons** ..	64,367	129,215	431,130	198,256	63,094	253,779	214,738
5. **Working Conditions** ..	584,289	128,967	69,732	123,665	134,830	124,041	150,325
6. **Sympathetic**	2,125	72,940	6,150	9,438	6,357	926	41,046
7. **Other Causes**	11,568	26,946	55,652	23,756	638,016	78,935	185,616
Total	1,090,395	1,872,065	956,617	858,685	1,145,977	918,646	1,128,570

(*a*) See footnote *, page 528. (*b*) See footnote (*a*), page 528.

The main causes of industrial disputes are " Wage " questions, " Working Conditions," and " Employment of Particular Classes or Persons." In each of the ten years 1914 to 1925, with the exception of 1922, the number of dislocations concerning wages exceeded those caused by any other question, and varied between a minimum proportion of 26 per cent. in 1922 and a maximum of 45 per cent. in 1916. The majority of the disputes classified under the heading, "Employment of Particular Classes or Persons," are stoppages of work for the purpose of protesting against the dismissal of certain employees, who, in the opinion of their fellow-workers, have been unfairly treated or victimized. This class of dispute occurs very frequently in the coal-mining industry. The number of disputes over " Trade Union " questions has represented a fairly uniform proportion of the total number of disputes during the years under review, while the figures under " Hours of Labour " show a steady decrease. " Sympathetic " disputes represent only a small proportion of the total disputes, varying over the years shown from one-quarter to three per cent.

7. **Results of Industrial Disputes.**—The following table shows the number of disputes, number of workpeople involved, and the number of working days lost in disputes throughout Australia during the five years 1921 to 1925, classified according to results :—

INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO RESULTS.—AUSTRALIA, 1921 TO 1925.(*a*)

Year.	No. of Disputes.				Number of Workpeople Involved in Disputes.				Total Number of Working Days Lost by Disputes.			
	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.
1921 ..	126	274	216	8	25,244	63,380	73,887	2,590	76,381	162,331	714,501	3,404
1922 ..	81	268	82	2	18,050	77,785	16 366	81	175,379	383,342	132,615	738
1923 ..	77	156	24	8	12,951	54,926	5,787	1,784	65,625	917,162	132,135	2,392
1924 ..	146	261	48	45	32,762	89,709	13,843	15,432	153,533	416,174	291,039	29,445
1925*a b*	130	335	20	6	50,983	116,658	4,844	2,829	448,136	549,796	52,321	12,92d

(*a*) See footnote (*a*), page 528.

(*b*) The following particulars of disputes which were incomplete at the 31st December, 1925, should be added to the above figures to effect a balance with those published in the preceding table :—

State.	No. of Disputes.	No. of Establishments.	Workpeople Involved.	Working Days Lost.	Wages Lost.
					£
New South Wales	6	6	1,285	57,078	65,866
Queensland	1	1	10	370	290
Western Australia	1	1	137	7,946	6,960
Total	8	8	1,432	65,394	73,116

8. **Methods of Settlement.**—The following tables show for Australia the number of disputes, number of workpeople involved, and number of working days lost in industrial disputes during the years 1914 and 1920 to 1925, classified according to the adopted schedule of methods of settlement :—

INDUSTRIAL DISPUTES.—METHODS OF SETTLEMENT, AUSTRALIA, 1914 TO 1925.(*a*)

Methods of Settlement.	1914.	1920.	1921.	1922.	1923.	1924.	1925.(*b*)
NUMBER OF DISPUTES.							
Negotiations—							
Direct between employers and employees or their representatives	247	380	412	249	140	264	209
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	11	25	65	52	25	20	24
Under State Industrial Acts—							
By intervention, assistance, or compulsory conference ..	7	33	18	7	4	11	12
By reference to Board or Court ..	17	8	4	7	2	7	2
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	5	8	11	5	2	12	13
By Filling Places of Workpeople on Strike or Locked Out ..	16	22	10	11	5	5	4
By Closing-down Establishment Permanently	4	4	2	6	1	2	1
By Other Methods	30	74	102	96	86	179	226
Total	337	554	624	433	265	500	(*c*) 491
NUMBER OF WORKPEOPLE INVOLVED.							
Negotiations—							
Direct between employers and employees or their representatives	48,204	101,404	93,912	62,000	30,213	70,895	75,961
By intervention or assistance of distinctive third party — not under Commonwealth or State Industrial Act	8,054	6,278	20,775	15,554	10,277	4,448	12,767
Under State Industrial Acts—							
By intervention, assistance, or compulsory conference ..	770	9,312	11,229	1,222	615	2,519	1,781
By reference to Board or Court ..	7,308	1,711	1,083	1,128	544	2,952	208
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	205	766	12,037	446	58	4,262	3,251
By Filling Places of Workpeople on Strike or Locked Out ..	629	2,141	334	790	315	130	160
By Closing-down Establishment Permanently	86	182	53	171	18	170	28
By Other Methods	5,793	33,772	25,678	30,971	33,408	66,370	81,158
Total	71,049	155,566	165,101	112,282	75,448	151,746	175,314
NUMBER OF WORKING DAYS LOST.							
Negotiations—							
Direct between employers and employees or their representatives	803,799	827,985	245,765	353,336	229,503	373,155	470,110
By intervention or assistance of distinctive third party — not under Commonwealth or State Industrial Act	128,231	217,916	156,076	187,164	582,929	103,005	320,046
Under State Industrial Acts—							
By intervention, assistance, or compulsory conference ..	4,256	69,436	136,735	16,016	25,531	41,900	17,650
By reference to Board or Court ..	120,685	19,236	22,752	13,767	8,484	142,939	4,338
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	1,421	34,205	327,048	8,081	473	74,376	67,272
By Filling Places of Workpeople on Strike or Locked Out ..	4,402	160,562	3,542	11,759	2,517	3,040	1,163
By Closing-down Establishment Permanently	3,646	12,919	538	603	18	1,250	1,932
By Other Methods	23,955	529,806	64,161	101,348	267,859	150,526	180,665
Total	1,090,395	1,872,065	956,617	692,074	1,117,314	890,191	1,063,176

(*a*) See footnote *, page 528. (*b*) See footnote (*a*), page 528. (*c*) See footnote (*b*), page 537.

INDUSTRIAL DISPUTES.—METHODS OF SETTLEMENT, AUSTRALIA, 1914 TO 1925 (*a*)—*continued.*

ESTIMATED LOSS IN WAGES.

Methods of Settlement.	1914.	1920.	1921.	1922.	1923.	1924.	1925.(*b*)
	£	£	£	£	£	£	£
Negotiation—							
Direct between employers and employees or their representatives	402,729	534,760	240,442	283,515	252,059	398,628	505,565
By intervention or assistance of distinctive third party — not under Commonwealth or State Industrial Act	66,225	154,093	146,929	200,835	676,288	114,830	230,771
Under State Industrial Act—							
By intervention, assistance, or compulsory conference ..	1,841	46,831	79,233	14,663	24.158	34,151	15,395
By reference to Board or Court ..	64,208	11,205	19,452	10,541	7,536	110,559	3,499
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	712	19,285	198,887	5,701	350	56,766	68,880
By Filling Places of Workpeople on Strike or Locked Out ..	2,076	94,235	2,203	8,670	1,737	2,111	1,225
By Closing-down Establishment Permanently	1,651	7,125	355	635	13	970	2,318
By Other Methods	11,786	356,182	69,527	92,308	279,104	167,149	206,775
Total	551,228	1,223,716	757,028	616,868	1,241,245	885,164	(*c*) 1,034,428

(*a*) See footnote *, page 528. (*b*) See footnote (*a*), page 528. (*c*) See footnote (*b*), page 537.

The majority of the disputes were settled by direct negotiations between employers and employees, the proportion so settled ranging between 47 per cent. in 1924 and 76 per cent. in 1921. The proportion of dislocations settled by compulsory conferences or the intervention and assistance of officials under State or Commonwealth Arbitration Acts has varied considerably during the period under review, ranging from 2 per cent. in 1923 to 15 per cent. in 1920. The proportion in 1925 was 8 per cent. In connexion with the comparatively large number of disputes which are classified as having been settled " By other methods," many stoppages of work occur each year, principally at collieries, but the cause for such stoppages is not officially known to the employers or their representatives. Such stoppages usually last for one day, and work is resumed without negotiations for a settlement of the trouble.

§ 2. Fluctuations in Employment.

1. **General.**—The particulars given in the following tables are based upon information furnished by the secretaries of trade unions. The membership of the unions regularly reporting is approximately 400,000. Unemployment returns are not collected from unions the members of which are in permanent employment, such as railway and tramway employees, and public servants, or from unions whose members are casually employed (wharf labourers, etc.). Very few of the unions pay unemployment benefit, but the majority of the larger organizations have permanent secretaries and organizers who are closely in touch with the members and with the state of trade within their particular industries. In many cases unemployment registers are kept, and provision is made in the rules for payment of reduced subscriptions by members out of work. In view of these facts, and of the large membership of the unions from which quarterly returns are received,

percentage unemployment results based on the information supplied may be taken to show the general trend of unemployment. Seasonal fluctuations in unemployment have been provided for by collecting returns quarterly since the 1st January, 1913, the yearly figures quoted representing the average of the four quarters.

2. **Unemployment.**—(i) *States.* In addition to the qualifications referred to above, allowance must be made for the circumstance that the industries included in the returns from trade unions are not quite identical in the various States. The results, may, however, be taken as representing fairly well labour conditions generally.

UNEMPLOYMENT.—STATES, 1925.

State.	Unions Reporting.		Unemployed.	
	Number.	Members.	Number.	Percentage.
New South Wales	102	166,062	18,252	11.0
Victoria	84	122,595	10,484	8.6
Queensland	44	35,852	2,365	6.6
South Australia	54	36,843	1,569	4.3
Western Australia	60	22,805	1,383	6.1
Tasmania	36	7,223	567	7.8
Australia	380	391,380	34,620	8.8

(ii) *Summary for Australia.* The following table gives a summary for Australia for the last five years :—

UNEMPLOYMENT.—AUSTRALIA, 1921 TO 1925.

Particulars.	Unions.	Membership.	Unemployed.	
			Number.	Percentage.
1921	449	361,744	40,549	11.2
1922	445	380,945	35,219	9.2
1923	436	376,557	26,672	7.1
1924	413	397,613	35,507	8.9
1925	380	391,380	34,620	8.8
1925 1st Quarter	405	406,859	37,836	9.3
2nd ,, ...	355	355,133	36,490	10.2
3rd ,, ...	372	376,278	29,861	7.9
4th ,, ...	388	423,248	34,287	8.1

NOTE.—Similar figures for each of the four quarters of the years since 1912 will be found in the Labour Reports. The quarterly figures show the number of persons who were out of work for three days or more during a specified week in each quarter, and the annual figures the average of the four quarters : they do not include persons out of work through strikes or lock-outs.

The highest percentage of unemployed yet recorded (12.5) was reached in the second quarter of 1921.

(iii) *Industrial Groups.* The next table shows the percentages unemployed in industrial groups. Industries in which employment is either unusually stable or exceptionally casual, such as railways, shipping, agricultural, pastoral, etc., and domestic, hotels, etc., are insufficiently represented in the returns owing to the impossibility of securing the necessary information from the trade unions. Particulars are not, therefore, shown separately for these groups, such returns as are available being included in the last group, "Other and Miscellaneous."

UNEMPLOYMENT IN INDUSTRIAL GROUPS.—AUSTRALIA, 1925.

Industrial Group.	Number Reporting.		Unemployed.	
	Unions.	Members.	Number.	Percentage.
I. Wood, Furniture, etc. ..	17	20,198	1,311	6.5
II. Engineering, Metal Works, etc.	61	61,118	7,004	11.5
III. Food, Drink, Tobacco, etc.. ..	50	38,251	3,730	9.8
IV. Clothing, Hats, Boots, etc. ..	20	39,649	2,445	6.2
V. Books, Printing, etc.	12	16,468	366	2.2
VI. Other Manufacturing	63	33,884	4,847	14.3
VII. Building	45	50,021	3,612	7.2
VIII. Mining, Quarrying, etc. ..	21	27,098	2,132	7.9
X. Land Transport other than Railway and Tramway Services	9	11,690	671	5.7
IX., XI., XII., XIII., and XIV., Other and Miscellaneous ..	82	93,003	8,502	9.1
All Groups	380	391,380	34,620	8.8

§ 3. Apprenticeship.

In Year Book No. 16, pp. 602–3, information was given with regard to legislation relating to the question of apprenticeship. Tables were included showing the periods of apprenticeship fixed in the awards of the various industrial tribunals of the States and Commonwealth, and also the proportion of apprentices to journeymen and journeywomen. This information has been omitted from the present issue, but further investigations are being made, and additional and more comprehensive information will be incorporated in a later issue.

D. ASSOCIATIONS.

§ 1. Labour Organizations.

1. **Registration.**—(i) *Under Trade Union Acts.* The benefits obtained by registering trade unions under the Trade Union Acts in force in the various States are not considered of much value; consequently the statistics of registered trade unions of employees do not accurately represent the position of unionism. Further, the returns for past years are so defective as to be practically valueless, inasmuch as no reliable indication is afforded of the numerical and financial position of the unions. Some of the registered unions fail to supply returns; this non-supply may lead to cancellation of the registration. Others have obtained the cancellation of their certificates of registration, the apparent reason being that they proposed to register under the Commonwealth Conciliation and Arbitration Act or a State Arbitration Act. In Queensland, some of the largest labour unions withdrew from registration during 1911, mainly on account of the necessity for closer restriction of their objects as set forth in their rules, consequent on legal decisions affecting trade unions. In Victoria and in South Australia very few of the existing unions are registered under the Trade Union Acts. It will be seen, therefore, that the available information under this heading is too meagre for statistical purposes.

(ii) *Under Industrial Arbitration Acts.* Information with regard to registrations of trade unions under the various State Industrial Arbitration Acts will be found in previous issues of the Year Book. The latest information available as to registrations is as follows:—New South Wales, 119 industrial unions of employers and 153 industrial unions of employees; Queensland, 86 industrial unions of employees with approximately 113,739 members; South Australia, 19 organizations of employees with 31,590 members;

Western Australia, 43 organizations of employers with 900 members, and 125 organizations of employees with 34,084 members. Registration under Commonwealth legislation began in 1906. In that and the four following years, there was but one union of employers; another was registered in 1911. The unions of employees registered were 20 in 1906, with 41,413 members. In May, 1926, there were on the register 16 organizations of employers with 7,461 persons, firms or corporations affiliated, and 143 organizations of employees with 666,154 members.

2. **Particulars regarding Trade Unions.**—(i) *Types.* The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organization, which, in its turn, may be merely a branch of a British or international union. Broadly speaking, there are four distinct classes of labour organizations, viz.:—(i) the local independent, (ii) the State, (iii) the interstate, and (iv) the Australasian or International, but a number of variations occur from each of these classes. The leading characteristics of each of these types were briefly outlined in Labour Report No. 2 (pp. 7 to 9) issued by this Bureau.

(ii) *Number and Membership.* As already stated, the figures for trade unions registered under the Acts do not represent the position of unionism in Australia. In 1912, the Labour and Industrial Branch of the Commonwealth Bureau of Census and Statistics was established, and with the cordial co-operation of the officials of the labour organizations, comprehensive figures relating to the development of organized labour are now available. The following table shows the position at the end of 1925:—

TRADE UNIONS, BRANCHES, AND MEMBERS, 1925.

State or Territory.	Number of Separate Unions.	Number of Branches.	Number of Members.
New South Wales	188	715	309,002
Victoria	154	367	220,941
Queensland	107	287	127,735
South Australia	101	85	73,611
Western Australia	114	152	48,855
Tasmania	75	45	15,130
Northern Territory	4	..	448
Total	743	1,651	795,722
Australia (*a*)	382 (*a*)	2,012 (*b*)	795,722

(*a*) Allowing for interstate duplication. (*b*) Number of distinct organizations and interstate groups of organizations in Australia—not the total number of organizations, which are practically independent and self-governing. (See below.)

In the preceding table the number of separate unions in each State refers to the number of unions which are represented in each State, exclusive of branches therein, and each union is counted once only. Except in the last line, the number of branches indicates the number of branches of State head offices, which may, of course, themselves be branches of an interstate or larger organization. In taking the total number of separate unions in Australia (see last line but one), it is obvious that, in the case of interstate and similar unions, there will be duplication, since each such union is counted once in each State in which it has any branches. In the figures given in the last line allowance has been made for this duplication. State branches of interstate or federated unions, as well as sub-branches within a State, are included under the heading "Branches" in the third column—last line. The scheme of organization of these interstate or federated unions varies greatly in character, and the number of separate Commonwealth unions does not, therefore, fairly represent the number of practically independent organizations in Australia. In some of these unions the State organizations are bound together under a system of unification and centralized control, while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes. There are therefore 382 distinct organizations and interstate groups of organizations in Australia, having 2,012 State branches and sub-branches, and a total of 795,722 members.

(iii) *Classification in Industrial Groups.* The following table shows the number of unions and members thereof in Australia at the end of each of the last five years. The number of unions specified refers to the number of different unions represented in each State ; and, while interstate or federated unions are counted once in each State in which they are represented, sub-branches within a State are not counted.

TRADE UNIONS.—INDUSTRIAL GROUPS, AUSTRALIA, 1921 TO 1925.

Industrial Groups.	1921.	1922.	1923.	1924.	1925.
NUMBER OF UNIONS.					
I. Wood, Furniture, etc	19	19	18	18	18 (4)[a]
II. Engineering, Metal Works, etc. ..	75	69	70	69	68 (21)
III. Food, Drink, Tobacco, etc. ..	66	68	64	65	65 (39)
IV. Clothing, Hats, Boots, etc ..	25	25	24	24	22 (10)
V. Books, Printing, etc.	18	17	14	14	14 (10)
VI. Other Manufacturing	85	84	79	78	78 (36)
VII. Building	57	54	52	51	51 (31)
VIII. Mining, Quarrying, etc. ..	19	19	16	16	15 (12)
IX. Railway and Tramway Services ..	49	52	51	51	50 (33)
X. Other Land Transport	20	20	14	13	13 (8)
XI. Shipping, etc.	70	74	94	91	56 (31)
XII. Pastoral, Agricultural, etc. ..	9	10	8	8	8 (3)
XIII. Domestic, Hotels, etc.	24	26	26	23	22 (16)
XIV. Miscellaneous	260	276	267	270	263 (128)
Total	796	813	797	791	743 (382)[a]
NUMBER OF MEMBERS.					
I. Wood, Furniture, etc.	25,541	23,582	24,465	23,859	32,279
II. Engineering, Metal Works, etc. ..	57,012	53,637	59,032	68,243	72,750
III. Food, Drink, Tobacco, etc. ..	51,698	54,497	58,663	55,402	58,326
IV. Clothing, Hats, Boots, etc. ..	42,069	44,540	45,842	46,521	44,632
V. Books, Printing, etc.	15,059	15,341	16,249	15,856	16,532
VI. Other Manufacturing	38,873	37,942	38,554	40,376	41,689
VII. Building	42,244	42,177	46,231	51,819	55,314
VIII. Mining, Quarrying, etc. ..	39,967	38,082	37,063	40,996	44,403
IX. Railway and Tramway Services ..	88,731	92,152	89,405	90,365	108,037
X. Other Land Transport	16,944	20,376	16,386	17,785	18,219
XI. Shipping, etc.	40,840	41,510	38,006	37,823	39,309
XII. Pastoral, Agricultural, etc. ..	47,893	43,538	36,584	46,081	48,157
XIII. Domestic, Hotels, etc.	20,442	21,130	20,713	22,861	24,251
XIV. Miscellaneous	175,696	174,434	172,550	171,168	191,824
Total	703,009	702,938	699,743	729,155	795,722

(a) Allowing for interstate duplication.

Particulars are given in Labour Report No. 16 of the number of male and female members of unions and the percentage of such members on the total number of adult wage-earners. Other tables in the same report show the classification of unions according to the number of members and the number of central labour organizations.

(iv) *Interstate or Federated Unions.* The following table gives particulars as to the number and membership of interstate or federated unions in 1925 :—

INTERSTATE OR FEDERATED UNIONS.—AUSTRALIA, 1925.

Particulars.	Unions Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States. (a)	
Number of Unions ..	19	16	9	23	37	104
Number of Members ..	22,250	49,234	72,977	171,908	326,624	642,993

(a) Certain unions in this group have, in addition to branches in each of the six States, a branch in the Northern Territory.

It appears, therefore, that 104 out of the 382 separate associations and groups of associations in Australia are organized on an inter-state basis. The membership of these 104 unions amounts to 642,993, or 81 per cent. of the total membership (795,772) of all unions.

3. **Central Labour Organization.**—In each of the capital cities, and in a number of industrial centres elsewhere, delegate organizations, consisting of representatives from a group of trade unions, have been established. Their revenue is raised by means of a per capita tax on the members of each affiliated union. In most of the towns where such central organizations exist, the majority of the local unions are affiliated with the central organisation, which is usually known as the Labour or the Trades Hall Council, or the Labour Federation. In Western Australia a unified system of organization extends over the industrial centres throughout the State. In this State there is a provincial branch of the Australian Labour Party, having a central council and executive, and metropolitan and branch district councils, to which the local bodies are affiliated. The central council, on which all district councils are represented, meets periodically. In the other five States, however, the organization is not so close, and, while provision usually exists in the rules of the central council at the capital city of each State for the organization of district councils or for the representation of the central council of the local councils in the smaller industrial centres of the State, the councils in each State are, as a matter of fact, independent bodies.

The table below shows the number of metropolitan and district or local labour councils, together with the number of unions and branches of unions affiliated thereto in each State at the end of the year 1925 :—

CENTRAL LABOUR ORGANIZATIONS.—NUMBER, AND UNIONS AFFILIATED, 1925.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Number of Councils	2	6	4	2	9	2	1	26
Number of Unions and Branch Unions affiliated ..	88	190	83	62	209	52	3	687

The figures given in the preceding table as to number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated to the local trades councils in the several towns in which they are represented.

Between the trade union and the central organization of unions may be classed certain State or district councils organized on trade lines, and composed of delegates from separate unions, the interests of the members of which are closely connected by reason of the occupation of their members. Delegate councils of bakers, bread carters, and mill employees, or of unions connected directly or indirectly with the iron, steel, or brass trades, or with the building trades may be so classed.

4. **Laws relating to Conditions of Labour.**—In Official Year Book No. 16, pp. 538 to 566, a conspectus was given of Labour Laws in force in Australia at the end of the year 1922, and of Acts and Regulations relating to Factories and Shops.

Information was contained in the same issue with regard to employment under Mining Acts, followed by a brief reference to Employers' Liability and Workmen's Compensation Acts and miscellaneous legislation relating to conditions of labour enacted by the States. A conspectus of the Tribunals for the Regulation of Wages and Conditions of Labour was also included. Owing to considerations of space these references have been omitted from the present issue.

§ 2. Employers' Associations.

1. **General.**—Recent investigations show that the spirit of association is no less manifest in the case of employers than in the case of workers. Associations for trade purposes merely are not included in the present chapter, which deals with those associations only whose members are united for their own protection, and for representation in cases before Arbitration Courts, Wages Boards and other wage-fixing tribunals. Associations of employers and employees are recognized under the Commonwealth Conciliation and Arbitration Act as well as under several State Acts, and organizations of these bodies may be registered.

2. **Employers' Associations in each State.**—The following table gives particulars of the number of employers' associations in each State at the end of the years 1922 to 1925 :—

EMPLOYERS' ASSOCIATIONS—STATES, 1922 TO 1925.

Year.	N.S.W.	Victoria.	Q'land.	S.A.	W.A.	Tas.	N. Ter.	Total.
				NUMBER OF ASSOCIATIONS.				
1922 ..	115	167	60	46	62	17	..	467
1923 ..	137	132	85	48	54	24	..	480
1924 ..	127	135	80	49	53	25	..	469
1925 ..	133	141	78	52	51	25	..	480
				NUMBER OF BRANCHES.				
1922 ..	135	71	39	..	12	5	..	262
1923 ..	102	49	54	..	12	8	..	225
1924 ..	79	41	70	..	12	8	..	210
1925 ..	480	621	194	1	17	2	..	1,315
				MEMBERSHIP.				
1922 ..	18,187	18,963	7,648	2,888	1,713	2,307	..	51,706
1923 ..	27,027	19,813	12,918	5,101	2,477	2,751	..	70,087
1924 ..	28,667	21,095	17,060	5,746	2,646	2,716	..	77,930
1925 ..	38,931	34,274	17,831	6,346	3,369	2,599	..	103,350

The decrease in 1924 in the number of associations is partly explained by the exclusion of certain associations which have been found to be not strictly employers' associations, while, in some cases, associations have become either inactive or defunct. On the other hand, the inclusion of additional associations accounts for the increased membership.

The large increase shown for " No. of Branches " for the year 1925 is wholly due to the inclusion of associations representing agricultural interests, while the increase in total membership is partly attributable to a more complete collection of statistics relating to these organizations.

The year 1922 was the first for which information was collected, and particulars for that year will be found in Year Book No. 17.

3. **Employers' Associations in Industrial Groups.**—The figures in the table hereunder refer to Australia at the end of the years 1924 and 1925.

EMPLOYERS' ASSOCIATIONS—INDUSTRIAL GROUPS—AUSTRALIA, 1924 AND 1925.

Class.	Number of Associations.		Number of Branches.		Membership.	
	1924.	1925.	1924.	1925.	1924.	1925.
I. Wood, Furniture, etc. ..	23	20	2	2	1,398	1,384
II. Engineering, etc ..	14	14	12	11	3,435	3,456
III. Food, Drink, etc. ..	101	100	40	25	15,556	17,865
IV. Clothing, Hats, etc. ..	20	22	..	9	4,462	2,832
V. Books, Printing, etc. ..	35	34	..	3	3,509	3,310
VI. Other Manufacturing ..	49	49	2	1	3,142	3,234
VII. Building	28	27	10	12	2,754	2,983
VIII. Mining, Quarrying, etc. ..	13	13	1	..	344	320
X. Other Land Transport ..	14	18	..	1	2,240	3,009
XI. Shipping, etc.	16	16	2	2	310	256
XII. Pastoral, Agricultural, etc.	25	30	139	1,243	22,280	46,487
XIII. Domestic, Hotels, etc. ..	18	17	..	..	3,696	1,727
XIV. Miscellaneous	113	120	2	6	14,804	16,487
Total	469	480	210	1,315	77,930	103,350

The female membership of these associations was 3,119 for 1924, and 4,924 for 1925.

The organization of employers is relatively strongest in the pastoral and agricultural industries and in the manufacture and distribution of articles of food and drink. In the former case there has been considerable growth in organization among small farmers, and in the latter, the number of small shops purveying foodstuffs of which the proprietors are members of grocers', butchers', and other similar associations accounts for the large membership.

4. **Federations of Employers' Associations.**—In addition to the associations in various industries, there are central associations in each State, to which many of these separate organizations are affiliated. Examples of this kind of association are provided in the Chamber of Manufactures, Chamber of Commerce, and Employers' Federation in each State. Further, these State associations are, in some cases, organized on a federal basis, e.g., there is an Associated Chamber of Manufactures, an Associated Chamber of Commerce, or a Central Employers' Association, to which State branches are affiliated.

The affiliation of these associations is, however, of a very loose nature when compared with that of the Federated Trade Unions. Whereas in the latter case the central body has complete control of its state branches, in the case of the Employers' Associations each state body enjoys complete independence, the central body acting in a more or less advisory capacity only.

The following table gives particulars, so far as can be ascertained, of inter-state or federated associations having branches in two or more States in 1923 to 1925 :—

INTER-STATE OR FEDERATED EMPLOYERS' ASSOCIATIONS, 1923 TO 1925.

Particulars.	Associations Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States.	
	NO. OF ASSOCIATIONS.					
1923	4	4	4	5	12	29
1924	2	6	6	11	9	34
1925	3	5	4	10	8	30
	NO. OF MEMBERS.					
1923	679	2,028	465	16,521	26,832	46,525
1924	427	595	829	29,612	26,523	57,986
1925	3,899	535	634	20,549	25,778	51,395

Of the total membership, amounting to 103,350, of these associations, 49.7 per cent. is organized on an inter-state basis.

CHAPTER XIV.

DEFENCE.

§ 1. Military Defence.

1. **State Systems.**—A detailed historical account of the Australian defence forces prior to Federation will be found in Official Year Book No. 2, pp. 1075–1080. See also Official Year Book No. 12, p. 999.

The strength of the military forces of the States on the 31st December, 1900 (the eve of Federation) was :—New South Wales, 9,338 ; Victoria, 6,335 ; Queensland, 4,028 ; South Australia, 2,932 ; Western Australia, 2,696 ; Tasmania, 2,024 ; total for Australia, 27,353. This total was exclusive of cadets, reservists, and rifle club members.

2. **Commonwealth System.**—(i) *General.* Under the terms of the Constitution Act 1900, the Commonwealth took over control of defence matters in March, 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in three phases, viz. :—

(*a*) The first phase, *i.e.*, the welding together of the military forces of the States into one homogeneous army, was entrusted by the Government in 1902 to Major-General Sir Edward Hutton, K.C.B., K.C.M.G., and a sound foundation was laid, upon which the subsequent organization and training were based.

(*b*) The second phase was the introduction of Universal Training in 1911. During the year 1909 a measure providing for universal training was enacted, and the scheme came into force in 1911 after the advice and recommendations of the late Lord Kitchener had been obtained. By the Defence Acts of 1903 and 1904 all male inhabitants between the ages of 18 and 60 years were made liable to serve in Australia with the defence forces in *time of war.* The more recent Acts make training and service compulsory up to the age of 26 years *in time of peace.* By the Act of 1909 the principle of universal liability to training was made law for the first time in any English-speaking community. More detailed reference to these matters will be found in Official Year Book No. 12, p. 999 *et seq.*

(*c*) The third phase, Divisional Organization, came into operation from the 1st May, 1921. Under this system a war organization, evolved from the Australian Imperial Force, is applied to peace conditions, with a minimum of permanent staff and forces. Numbers of units and formations have been altered to correspond with those of the A.I.F. and every effort is being made to maintain the traditions established by those units in the Great War.

(ii) *Military Population.* In connexion with the numbers available, the figures of male population are of interest. The total number at cadet age, *i.e.*, between 12 and 18, at the Census of 1921 (4th April) was about 300,000 ; at citizen soldier age, *i.e.*, between 18 and 26, 353,000 ; these latter, with 409,000 at ages between 26 and 35, give 762,000 as the total males at the best period for military service. It is estimated that 529,000 of those available between the ages of 18 and 35 were not married or widowers without children, and 233,000 were married or widowers with children. In addition, there were about 762,000 between the ages 35 and 60.

(iii) *Allotment of Units.* The organization is territorial, and the divisions based upon infantry units. There are 61 battalions, forming 15 brigades. The areas have approximately equal numbers of males of citizen soldier age, and each furnishes a battalion of infantry, and a proportion of other troops.

ALLOTMENT OF UNITS TO AREAS, 1st FEBRUARY, 1926.

State.	Brigade Areas.	Battalion Areas.												Training Areas.
			Providing the undermentioned Units—											
						Engineers.		Signallers.			A.A.M.C.			
		Number of Areas.	Infantry Battalions.	Light Horse Regiments.	Field Artillery Batteries.	Companies.	Troops.	Sections.	Troops.	A.A.S.C. Companies.	Field Amb.	Sanitary Sections.	A.A.V.C. Sections.	
N.S. Wales ..	5	20	21	7	17	7	3	18	4	10	8	3	4	35
Victoria ..	5	20	21	6	17	7	3	18	4	10	7	2	4	27
Queensland ..	2	8	8	4	7	2	1	9	1	3	3	1	1	11
S. Aust. ..	1	4	4	4	4	1	1	2	1	2	2	1	1	7
W. Aust. ..	1	4	4	1	3	1	..	4	..	1	1	1	..	7
Tasmania ..	1	3	3	1	2	1	..	3	..	1	1	1	..	4
Total ..	15	59	61	23	50	19	8	54	10	27	22	9	10	91

(iv) *Strength of Military Forces.* (*a*) *Districts.* There was little alteration in the numbers serving in the Australian military forces from the institution of the Commonwealth to the year of the introduction of the compulsory training system. From 1913 to 1918, however, the annual increase was considerable. As a result of the International Conference which met at Washington on the 11th November, 1921, it was decided by the Australian Government in 1922 that the universal training law is to be continued, but its operation is to be restricted to the more populous centres and to certain quotas only. As from 1st July, 1925, Senior Cadet training is confined to one quota instead of four quotas, and training commences on the 1st July of the year in which persons liable reach the age of 17 years. Citizen Force training is confined to three quotas instead of seven quotas, and commences on the 1st July of the year in which persons liable reach the age of 18 years, and continues until the 30th June of the year in which they reach the age of 21 years. Notwithstanding these reductions in training, the liability to register at the age of 14 years and to serve for the full period prescribed by the Defence Act remains. Junior Cadet training of boys of the age of 12 and 13 years was in abeyance during the years 1922-23 and 1923-24, but has been resumed as an activity of the Defence Department as from 1st July, 1924. The existing Divisional Organization of the Field Force is being retained in skeleton form, units being maintained at considerably below war strength.

TRAINING STRENGTH OF MILITARY FORCES, 1901, 1913, AND 1921 TO 1926.

(*a*)District.	1901. (*b*)1/3/01.	1913. 30/6/13.	1921. 31/12/21.	1922. 31/12/22.	1923. 31/12/23.	1925. 1/2/25.	1926. 1/2/26.
Hd.-Qrs.(*c*) ..	..	277	458	499	58	130	178
1st (Q'ld.) ..	4,310	4,625	14,752	4,319	4,212	4,263	4,863
2nd (N.S.W.) ..	9,772	12,105	46,924	14,561	15,211	15,420	17,305
3rd (Vict.) ..	7,011	10,840	41,484	11,117	11,825	11,847	14,638
4th (S. Aus.) ..	2,956	3,228	12,495	3,452	3,828	3,772	4,200
5th (W. Aus.) ..	2,283	1,685	6,540	2,018	2,170	2,205	2,688
6th (Tas.) ..	2,554	1,777	5,307	1,190	1,299	1,252	1,401
Total ..	28,886	34,537	127,960	37,156	38,603	38,889	45,273

(*a*) Approximately conterminous with boundaries of States. (*b*) Date of taking over the military forces from States by Commonwealth. (*c*) Including cadets at Royal Military College of Australia, and Staff Corps Officers abroad or training with other Commonwealth Departments.

(*b*) *Various Arms.* The numbers of the different arms of the service on the 1st February, 1926, were as follows :—

ARMS OF THE COMMONWEALTH MILITARY FORCES, 1st FEBRUARY, 1926.(*a*)

Light Horse	3,989	Ordnance (including Armament Artificers)	199
Field Artillery	5,494	Survey Section (Engineers) ..	14
Garrison Artillery	1,459	R.A.E. (Works Section) ..	19
Field Engineers	2,293	Royal Military College (Cadets)	61
Signallers	1,654	Provost Staff	14
Fortress Engineers	387	Legal Department	37
Infantry	25,700	Intelligence Section G.S. ..	12
Army Service Corps	1,399	Engineer and Railway Staff Corps	55
Army Medical Corps	1,464		
Army Veterinary Corps ..	192		
Australian Instructional Corps ..	589		
Staff Corps	242	Grand Total	45,273

(*a*) Excluding civilian staff.

(*c*) *Classification of Land Forces.* The following table shows the strength of the land forces in each State, classified according to nature of service, on the 1st February, 1926 :—

CLASSIFICATION OF LAND FORCES,(*a*) 1st FEBRUARY, 1926.

Branch of Service.	Army Head-quarters.	1st Military District. (Qld.)	2nd Military District. (N.S.W.)	3rd Military District. (Vic.)	4th Military District. (S. Aus.)	5th Military District. (W. Aus.)	6th Military District. (Tas.)	Total.
Permanently employed ..	(*b*)166	143	636	509	91	128	67	1,740
Citizen soldiers	12	4,720	16,669	14,129	4,109	2,560	1,334	43,533
Unattached list of officers	..	51	(*b*)152	(*b*)153	34	37	28	455
Reserve of officers ..	..	1,210	2,747	3,365	884	741	274	9,221
Chaplains	8	57	126	141	40	33	25	430
Total	186	6,181	20,330	18,297	5,158	3,499	1,728	55,379

(*a*) Excluding civilian staff. (*b*) Including cadets at Royal Military College of Australia and Staff Corps Officers stationed abroad and training with other Commonwealth Departments.

(*d*) *Numbers Serving under Compulsory Provisions.* (*1*) *General.* The following tables show the numbers registered and training under the compulsory system, distinguishing Citizen Forces and Senior Cadets.

(*2*) *Citizen Forces 1905, 1906, and 1907 Quotas.* Registrations under these quotas as at the 31st December, 1925, are given hereunder.

UNIVERSAL TRAINING.—CITIZEN FORCES REGISTRATIONS, QUOTAS IN TRAINING (1905, 1906 AND 1907 QUOTAS), AS AT 31st DECEMBER, 1925.

Military Formations and Districts.	1907 Quota.	1906 Quota.	1905 Quota.	Total.
1st Division (2nd M.D.)	4,343	4,894	4,518	13,755
2nd Division (2nd M.D.)	7,694	7,540	7,321	22,555
3rd Division (3rd M.D.)	5,869	5,687	5,751	17,307
4th Division (3rd M.D.)	3,440	3,636	3,720	10,796
4th Division (4th M.D.)	2,705	2,862	2,852	8,419
11th Mixed Brigade (1st M.D.) ..	4,236	3,968	4,190	12,394
12th Mixed Brigade (6th M.D.) ..	1,085	1,156	1,292	3,533
13th Mixed Brigade (5th M.D.) ..	2,186	2,148	2,194	6,528
Total	31,558	31,891	31,838	95,287

(3) *Registrations, 1900 to 1904 Quotas.* Figures relating to these quotas have been included in the next table :—

CITIZEN FORCES.—REGISTRATIONS, QUOTAS NOT IN TRAINING (1900 TO 1904 QUOTAS), AS AT 31st DECEMBER, 1925.(*a*)

Military Districts.	Total Registrations in Training Areas.					Total.
	Quota, 1900.	Quota, 1901.	Quota, 1902.	Quota, 1903.	Quota, 1904.	
1st	4,865	4,453	4,260	3,673	4,154	21,405
2nd	10,058	9,970	10,451	10,968	12,052	53,499
3rd	7,325	7,390	7,248	8,359	9,340	39,662
4th	3,226	2,878	2,805	2,874	3,261	15,044
5th	1,178	1,244	1,347	1,989	2,095	7,853
6th	1,381	1,222	1,181	1,204	1,300	6,288
Total	28,033	27,157	27,292	29,067	32,202	143,751

(*a*) Latest particulars available, as no training is required of these quotas.

(4) *Exemptions and Missing Trainees.* Particulars for the 1905, 1906, and 1907 quotas are given hereunder :—

CITIZEN FORCES.—EXEMPTIONS AND MISSING TRAINEES, QUOTAS IN TRAINING (1905, 1906, AND 1907 QUOTAS), 31st DECEMBER, 1925.

Military Formations and Districts.	Exemptions.				Missing Trainees.
	1907 Quota.	1906 Quota.	1905 Quota.	Total.	1907, 1906, and 1905 Quotas.
1st Division (2nd M.D.)	2,473	2,516	2,470	7,459	242
2nd Division (2nd M.D.)	4,639	4,323	4,332	13,294	581
3rd Division (3rd M.D.)	2,793	2,510	2,727	8,030	690
4th Division (3rd M.D.)	2,043	2,095	2,248	6,386	329
4th Division (4th M.D.)	1,450	1,561	1,576	4,587	88
11th Mixed Brigade (1st M.D.) ..	2,946	2,756	2,982	8,684	84
12th Mixed Brigade (6th M.D.) ..	747	790	902	2,439	89
13th Mixed Brigade (5th M.D.) ..	1,397	1,366	1,521	4,284	18
Total	18,488	17,917	18,758	55,163	2,121

(5) *Trainees Serving with Senior Cadets as Officers.* The number of Citizen Force trainees serving as officers of Senior Cadets at the end of 1925 is given in the next table :—

TRAINEES OF CITIZEN FORCE AGE SERVING AS OFFICERS OF SENIOR CADETS, 31st DECEMBER, 1925.

Military Formations and Districts.	1907 Quota.	1906 Quota.	1905 Quota.	Total.
1st Division (2nd M.D.)	2	8	1	11
2nd Division (2nd M.D.)	5	30	10	45
3rd Division (3rd M.D.)	7	21	..	28
4th Division (3rd M.D.)	2	8	1	11
4th Division (4th M.D.)	1	8	4	13
11th Mixed Brigade (1st M.D.) ..	..	16	1	17
12th Mixed Brigade (6th M.D.) ..	2	3	1	6
13th Mixed Brigade (5th M.D.) ..	1	8	1	10
Total	20	102	19	141

(6) *Senior Cadets—Registrations, etc.* Registrations and numbers in training from the 1908 to 1911 quotas at the end of 1925 are shown in the next table :—

SENIOR CADETS.—REGISTRATIONS AND NUMBER ACTUALLY IN TRAINING, 31st DECEMBER, 1925 (1908 TO 1911 QUOTAS).

Military Formations and Districts.	Total Registrations—Senior Cadets.					Number actually Training—Senior Cadets.
	1911 Quota.	1910 Quota.	1909 Quota.	1908 Quota.	Total.	1908 Quota.
1st Division (2nd M.D.) ..	2,663	3,089	3,218	3,933	12,903	2,514
2nd Division (2nd M.D.) ..	5,066	5,701	5,898	7,170	23,835	4,144
3rd Division (3rd M.D.) ..	3,533	4,176	4,363	5,547	17,619	3,616
4th Division (3rd M.D.) ..	2,226	2,564	2,562	3,055	10,407	1,637
4th Division (4th M.D.) ..	1,748	2,099	2,219	2,865	8,931	1,668
11th Mixed Brigade (1st M.D.)	2,275	2,926	3,106	3,971	12,278	1,838
12th Mixed Brigade (6th M.D.)	773	942	809	1,048	3,572	424
13th Mixed Brigade (5th M.D.)	1,400	1,707	1,598	2,034	6,739	1,045
Total	19,684	23,204	23,773	29,623	96,284	16,886

(7) *Senior Cadets—Exemptions and Missing Trainees.* Figures regarding these at the end of 1925 are shown below :—

SENIOR CADETS.—EXEMPTIONS AND MISSING TRAINEES, 31st DECEMBER, 1925.

Military Formations and Districts.	Exemptions.					Missing Trainees.
	1911 Quota.	1910 Quota.	1909 Quota.	1908 Quota.	Total.	
1st Division (2nd M.D.) ..	81	183	181	1,383	1,828	36
2nd Division (2nd M.D.) ..	62	107	129	2,938	3,236	103
3rd Division (3rd M.D.) ..	2	13	69	1,799	1,883	135
4th Division (3rd M.D.) ..	18	42	67	1,345	1,472	74
4th Division (4th M.D.) ..	23	61	65	1,176	1,325	22
11th Mixed Brigade (1st M.D.)	23	63	127	2,103	2,316	37
12th Mixed Brigade (6th M.D.)	7	21	15	610	653	14
13th Mixed Brigade (5th M.D.)	4	5	45	984	1,038	5
Total	220	495	698	12,338	13,751	426

(8) *Citizen Forces—Medical Examinations.* The following table shows the results of examinations of the 1907 quota as at the end of 1925 :—

CITIZEN FORCES.—MEDICAL EXAMINATIONS, 1907 QUOTA, YEAR ENDED 31st DECEMBER, 1925.

Military Formations and Districts.	Number of Examinations carried out.	Fit.		Unfit (A.M.R. 369).		Unfit (other than those under A.M.R. 369).	
		Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
1st Division (2nd M.D.)	2,825	1,960	69.38	38	1.35	827	29.27
2nd Division (2nd M.D.)	5,087	3,237	63.63	10	0.20	1,840	36.17
3rd Division (3rd M.D.)	3,998	2,893	72.36	39	0.98	1,066	26.66
4th Division (3rd M.D.)	1,947	1,344	69.03	12	0.62	591	30.35
4th Division (4th M.D.)	2,109	1,469	69.65	21	1.00	619	29.35
11th Mixed Brigade (1st M.D.) ..	2,260	1,332	58.94	58	2.57	870	38.49
12th Mixed Brigade (6th M.D.) ..	482	329	68.26	14	2.90	139	28.84
13th Mixed Brigade (5th M.D.) ..	1,194	897	75.12	18	1.51	279	23.37
Total ..	19,902	13,461	67.64	210	1.05	6,231	31.31

(v) *Administration and Instruction.* The staff provided for the administration and training of the various arms consists of 242 officers (Staff Corps), 52 quartermasters, and 537 warrant and non-commissioned officers (Australian Instructional Corps).

(vi) *Royal Military College, Duntroon.* This College was established at Duntroon in the Federal Capital Territory for the purpose of providing trained officers for the permanent forces. Admission is by open competitive examination, a definite number of vacancies being allotted to each State on a population basis. Further particulars respecting the College are given on page 915 of Official Year Book No. 15. On 1st February, 1926, the staff numbered—military, 21 ; civil, 10. The cadets in training at the same date numbered 61.

(vii) *Railways and Defence.* A War Railway Council, consisting of military and railway officers, was instituted in 1911. Its chief duties are to furnish advice and information regarding railway transport for military purposes, and to secure co-operation between the Defence Department and the Railway Departments in regard to concentration and mobilization of troops. To prevent delay in the transport of troops, particularly that caused by the transhipment of baggage and implements of war, the Council has recommended the adoption of a uniform railway gauge on lines linking up the States' capitals. An Engineer and Railway Staff Corps has been instituted, and numbered 55 officers on 1st February, 1926. Fuller details will be found in Official Year Book No. 6, pp. 1070–1.

(viii) *Rifle Clubs.* On the 28th February, 1926, there were 1,105 rifle clubs with a membership of 41,246, and 93 miniature rifle clubs having a membership of 3,337. Members of rifle clubs must fire an annual course of musketry, but do not undergo any systematic drill.

On the 3rd August, 1921, the administration of rifle clubs was transferred from military to civil control, and rifle clubs ceased to form part of the military organization.

§ 2. Naval Defence.

1. **State Systems.**—Information regarding naval defence systems prior to 1901 will be found in Official Year Book No. 12, p. 1011, but considerations of space preclude its insertion in the present volume.

2. **The Present System.**—(i) *General.* An outline of the development of Australian naval policy was given in Official Year Book No. 3, pp. 1060–61, and No. 12, p. 1012. Some account of the building of the Australian Fleet, the proposed and modified cost thereof, the compact with the Imperial Government, etc., appears in Official Year Book No. 15, pp. 921 *et seq.* Up to the 30th June, 1925, the expenditure on construction amounted to £7,171,725.

The Washington Conference of 1921 has had a marked effect on Naval Defence schemes, and all warship building and naval base construction were for a time suspended. The Fleet personnel was reduced from 4,843 in 1921 to 3,500 in 1923, and the ships in commission were reduced from 25 to 13. H.M.A.S. *Australia* was sunk in accordance with the provisions of the Washington Treaty on 12th April, 1924.

In 1925 the Commonwealth Government, however, decided to build two 10,000 cruisers (the maximum size at present allowed for new construction under the Washington Conference), two ocean-going submarines, and a seaplane-carrier. The order for the two cruisers was placed in Scotland, and they are expected to be in commission in 1928. The two submarines, which will be built in England, are to be delivered early in 1927. The seaplane-carrier (approx. 6,000 tons) is to be built at Cockatoo Island Dockyard, Sydney, by the Commonwealth Shipping Board.

To ensure closer co-operation with the Royal Navy, arrangements have been concluded with the Admiralty for the annual exchange of a cruiser, thus giving an opportunity for Australian sailors to gain experience in fleet exercises on a large scale.

The British Admiralty have, in addition, lent to the Royal Australian Navy the sloop *Silvio*, which has been refitted in England as a surveying ship, and renamed H.M.A.S. *Moresby*. This vessel will be principally employed with H.M.A.S. *Geranium* in surveying the Great Barrier Reef. The Commonwealth Government is, moreover, negotiating with the New South Wales Government for the building of a floating dock, which will be available for naval use in times of war or emergency.

(ii) *Naval College.* A naval college was established at Geelong in 1913, and was transferred in 1915 to Captain's Point, Jervis Bay, New South Wales. The course is similar to that carried out in naval colleges in England. In March, 1926, there were 52 cadet midshipmen under training. A boy whose thirteenth birthday falls in the year in which the entrance examination is held is eligible to compete, provided he is the son of natural-born or naturalized British subjects. From amongst those qualified the selection committee chooses the number required. The Commonwealth Government bears the whole expense of uniforms, victualling, travelling, as well as that of the educational course. Altogether 145 officers who have passed through the College are now serving with the Fleet.

(iii) *Training Ship.* H.M.A.S. *Tingira*, moored in Rose Bay, Sydney, was commissioned in April, 1912, to train boys for the personnel of the Royal Australian Navy. The age of entry is 14¾ to 16¾ years. Only boys of very good character and physique are accepted, after a strict medical examination, and they must engage to serve until they reach the age of 30. The training lasts about one year, and trainees are then drafted to a sea-going warship of the Australian Fleet. Recruiting has been satisfactory, and 250 boys were under training in March, 1926. It is proposed shortly to dispense with the *Tingira* and carry out the training at Osborne House, Geelong.

(iv) *The Naval Station.* A description of the limits of the Australian Naval Station is contained in previous issues of the Official Year Book (see No. 18, pp. 608–9), but lack of space precludes its repetition in the present issue.

(v) *Vessels.* A list of the vessels of the Royal Australian Navy is given hereunder.

SHIPS OF THE ROYAL AUSTRALIAN NAVY, FEBRUARY, 1926.

Vessel.	Description.	Displacement.	Power.
		Tons.	H.P.
Adelaide	Cruiser	5,500	25,000
Anzac	Flotilla Leader	1,660	36,000
Australia (building)	Cruiser	10,000	80,000
Brisbane	,,	5,400	25,000
Canberra (building)	,,	10,000	80,000
Cerberus	Motor-boat	61	220
Penguin	Depot Ship	5,880	12,500
Geranium	Sloop	1,250	2,000
Huon	Destroyer	700	11,300
Mallow	Sloop	1,200	1,800
Marguerite	,,	1,250	2,200
Melbourne	Cruiser	5,400	25,000
Moresby	Sloop	1,320	2,500
*O.A.*1 (building)	Submarine	..	..
*O.A.*2 ,,	,,	..	..
Parramatta	Destroyer	700	9,000
Stalwart	,,	1,075	27,000
Success	,,	1,075	27,000
Swan	,,	700	10,000
Swordsman	,,	1,075	27,000
Sydney	Cruiser	5,400	25,000
Tasmania	Destroyer	1,075	27,000
Tattoo	,,	1,075	27,000
Tingira	Boys' Training Ship	1,800	..
Torrens	Destroyer	700	10,000
Warrego	,,	700	9,000
Yarra	,,	700	9,000
FLEET AUXILIARIES—			
Biloela	Fleet Collier and Oiler	5,700	2,300
Kurumba	Fleet Oiler	3,970	..

(vi) *Naval Forces.* Besides the sea-going forces, there is a R.A.N. Reserve, which is composed of Citizen Naval Trainees. The personnel of the sea-going forces, which was originally largely composed of Imperial officers and men, is now more than 90 per cent. Australian. To facilitate the training of the Naval Reserve, destroyers (River Class) which are held in reserve have been stationed in various training districts throughout Australia. The strength of the naval forces is given hereunder.

STRENGTH OF NAVAL FORCES (PERMANENT AND RESERVES), 15th FEBRUARY, 1926.

Description of Force.	Numbers Borne.		
	In Training	Officers.	Men.
Royal Australian Navy (Sea-going)	..	435	4,301
Royal Australian Naval Auxiliary Services	..	41	174
Cadet Midshipmen undergoing training at R.A.N. College	52	..	..
Boys undergoing training on H.M.A.S. *Tingira*	231	..	..
Royal Australian Naval Reserve (Sea-going)	..	56	..
Royal Australian Fleet Reserve	..	..	100
Royal Australian Naval Reserve	..	212	6,593
Royal Australian Naval Volunteer Reserve	..	4	174

§ 3. Air Defence.

1. **General.**—A statement in regard to the preliminary steps taken in connexion with the development of air defence will be found in Official Year Book No. 18, p. 610.

Under the Air Board Regulations issued in October, 1922, the Royal Australian Air Force is administered by a Board consisting of two Air Force members and a Finance member. To this Force in entrusted the air defence of Australia, the training of personnel for co-operation with the naval and military forces, and the refresher training of pilots engaging in civil aviation. The present establishment of the Force includes the following units :—(*a*) Head-Quarters, Royal Australian Air Force, with representation at the Air Ministry in London ; (*b*) One Station containing a Flying Training School, a Stores Depot, and one composite squadron ; (*c*) One Station containing one composite squadron and one flight ; (*d*) An Experimental Section.

In deciding all matters of policy the Minister is assisted by a representative Air Council, which includes officers of the Navy, Army, and Air Force, and the Controller of Civil Aviation.

2. **Establishment.**—The present approved establishment of the Permanent Air Force is 88 officers and 628 airmen, and of the Citizen Air Force, 48 officers and 222 airmen.

3. **Aerial Routes.**—Aerodromes and Alighting Sites have been prepared between the capital cities and on certain parts of the coast for service and civil purposes. The total number prepared to date is 164.

4. **Civil Aviation.**—Details regarding the formation and activities of the Civil Aviation Department will be found in Chapter VII., Section D. Aircraft.

§ 4. Expenditure on Defence.

1. **Expenditure, 1901–2 to 1925–26.**—The following table shows Defence expenditure in 1901–2 and during each of the last five years. Details of the expenditure of the Defence Department and the cost of the war and repatriation are given in Chapter VIII.—Finance.

DEFENCE EXPENDITURE.—AUSTRALIA, 1901–2 AND 1921–22 TO 1925–26.

Year.	Naval.		Military.		Air.		Total Defence Expenditure. (*a*) (*b*)
	Under Ordinary Votes and Appropriations.	Total Naval. (*a*)	Under Ordinary Votes and Appropriations.	Total Military. (*a*)	Under Ordinary Votes and Appropriations.	Total Air. (*a*)	
	£	£	£	£	£	£	£
1901–2	178,819	178,819	777,620	780,260	..	..	959,079
1921–22(*b*) ..	2,375,965	3,212,736	1,925,924	41,726,436	155,082	285,686	45,224,858
1922–23(*b*) ..	2,124,491	2,575,131	1,481,754	33,351,849	179,337	273,031	36,200,011
1923–24(*b*) ..	2,084,420	2,279,310	1,545,454	32,922,571	222,657	306,418	35,508,299
1924–25(*b*) ..	2,016,402	2,200,946	1,551,448	31,342,574	216,544	284,623	33,828,143
1925–26(*b*) (Estimated)	2,200,492	2,498,705	1,594,148	31,547,473	286,441	445,220	34,491,398

(*a*) During the war years and subsequently, war expenditure and war expenditure on works included in total. (*b*) Not including War Gratuity (see p. 557).

NOTE.—In the year 1900–1 the approximate Defence Expenditure by the States was—

Ordinary Services	£800,000
Works, Arms, Equipment, etc.	200,000
Total	£1,000,000

2. **Comparison with other Countries.**—The total expenditure on defence, and the expenditure per inhabitant in various countries according to estimates made immediately prior to the late war, and for the latest available year are as follows :—

DEFENCE EXPENDITURE.—VARIOUS COUNTRIES.

Country.	Year.	Total Expenditure.	Per Inhabitant.		Year.	Total Expenditure.(a)	Per Inhabitant.	
		£	s.	d.		£	s.	d.
Great Britain ..	1913–14	77,179,000	33	9	1924–25	115,311,000	53	9
Germany ..	,,	97,845,000	30	2	,,	23,177,000	7	9
France.. ..	1913	56,738,000	28	7	1925	56,080,000	28	7
Italy	1913–14	23,614,000	13	7	1924–25	24,719,000	12	6
Switzerland ..	1913	1,772,000	9	1	1925	3,428,000	17	8
Spain	,,	9,218,000	9	3	1924–25	14,430,000	13	3
Portugal ..	1913–14	3,041,000	10	3	1925–26	1,830,000	6	1
Norway ..	,,	1,204,000	9	11	1924–25	1,476,000	11	2
Sweden ..	1913	4,510,000	16	0	,,	8,510,000	28	4
Denmark ..	1913–14	1,625,000	11	5	1925–26	2,516,000	15	5
Holland ..	1913	4,458,000	14	6	1924	8,616,000	24	4
Belgium ..	,,	3,260,000	8	7	,,	9,192,000	24	0
United States ..	1913–14	64,537,000	14	0	1925–26	128,723,000	24	4
Canada ..	1912–13	1,872,000	5	2	1924–25	2,445,000	5	7
Japan	1913–14	12,039,000	3	6	,,	24,192,000	8	2
Australia ..	,,	4,752,000	19	5	1925–26	7,653,828	25	6
New Zealand ..	,,	539,000	9	11	1924–25	681,395	10	3
South Africa (b)	1913–14	1,279,567	19	1	1924–25	1,044,191	12	9

(a) Excluding expenditure in connexion with the late war. (b) Whites only.

§ 5. Munitions Supply.

1. **General.**—A statement dealing with the powers and functions of the Munitions Supply Board is given on p. 612 of Official Year Book No. 18, but limits of space preclude its repetition in the present volume.

2. **Factories.**—(1) *General.* The Explosives Factories at Maribyrnong, Victoria, which manufacture explosives for cartridges and artillery ammunition, were established in 1911. The staff at 30th June, 1925, numbered 127.

The Cordite Factory, Maribyrnong, Victoria, which manufactures explosives for cartridges and artillery ammunition, was established in 1911. The staff at 30th June, 1925, numbered 118.

The Acetate of Lime Factory, established at Bulimba, Brisbane, in September 1918, provides acetate of lime (a raw material used in the manufacture of acetone) and is at present producing alcohol fuel for the use of Government motor vehicles. Employees at 30th June, 1925, numbered 26.

The Clothing Factory at Melbourne, Victoria, which had a staff of 283 employees on 30th June, 1925, commenced output in July, 1912, and since that date has been able to supply the whole of the uniform clothing required for the Defence forces, and the Postmaster-General's Department. It also supplies clothing required by State Departments and local public bodies.

The Small Arms Factory at Lithgow, New South Wales, which was opened on 1st June, 1912, and delivered the first instalment of Australian arms in May, 1913, had on its pay roll on 30th June, 1925, 369 employees. Rifles are being produced, and the manufacture of pistols and machine guns has been undertaken.

On 1st January, 1921, by virtue of an agreement with the Colonial Ammunition Company Limited, the Defence Department entered into possession on lease of the Company's works at Footscray, Victoria, and had at 30th June, 1925, 201 persons employed there. At the works, which are known as the Defence Small Arms Ammunition Factory, rifle and pistol ammunition are manufactured.

(ii) *Expenditure on Factories.* The expenditure up to 30th June, 1925, on land, buildings, machinery and plant, factory fittings and furniture in connexion with the factories now in operation was approximately as follows:—Small Arms Factory, £529,618; Explosives Factories, £385,784; Clothing Factory, £40,127; Acetate of Lime Factory, £158,223.

§ 6. Remount Depot.

Information in regard to the establishment of this branch of activity is contained in previous issues of the Official Year Book (see No. 18, p. 613). When war was declared in 1914 little difficulty was experienced by the Remount Service in coping with the enormous task of obtaining and training horses for the mounted units of the A.I.F. and in providing for the shipment of horses to Egypt and India as required.

§ 7. Australian Contingents.

1. **General.**—In previous issues of the Year Book an account was given of the composition, etc., of the Australian contingents despatched for service in the New Zealand and Sudan Campaigns, in South Africa, China, and the Great War of 1914–18 (see Official Year Book No. 12, pp. 1019 *et seq.*).

2. **Australian Troops (Great War).**—Particulars of the enlistments, casualties, honours and decorations won, and engagements of the Australian Imperial Force during the Great War were given in Official Year Book No. 16, pp. 628 *et seq.* Limits of space, however, preclude the repetition of this information in the present volume.

§ 8. War Gratuity.

Reference was made in preceding Year Books (see No. 15, p. 930) to the bonus payable in accordance with the War Gratuity Acts of 1920 as a war service gratuity to soldiers and sailors who served in the Great War. Owing to limitations of space this information cannot be repeated, but it may be noted that the gratuity was paid in Treasury bonds, maturing not later than 31st May, 1924, and bearing interest at 5½ per cent. In necessitous cases payment was made in cash when desired by the person entitled. The first gratuities were made available about the beginning of June, 1920. The gratuities numbered 360,000, and the total amount paid was £27,424,317.

§ 9. Special Defence Legislation.

Information regarding special defence legislation enacted by the Commonwealth Government during the War was given in Official Year Book No. 15, p. 930. It may be pointed out here that the War Precautions Act Repeal Act of 1920 repealed the Act 1914–18, but a limited number of matters dealt with under the original Act are now provided for under the War Precautions Act Repeal Act of 1920 or by regulations made thereunder.

§ 10. Repatriation.

1. **General.**—An outline of the activities leading up to the formation of the Commonwealth Department of Repatriation was given in Official Year Book No. 15, p. 931, but limits of space preclude its repetition in the present volume. Some account was given also in the Year Book referred to, and in subsequent issues, of the policy and activities of the Department generally, while detailed information was incorporated in regard to such matters as sustenance rates and pensions to soldiers and dependents. (See Official Year Book 17, pp. 598 to 601.)

2. Pensions.—The pensions in force on the 31st December, 1925, numbered 248,599, and the amount expended thereon during the nine months ending 31st March, 1926, was £5,608,093.

3. Summary of Activities.—The following is a summary of the work of the Department from 8th April, 1918, to 31st December, 1925 :—

(i) *Employment.* Number of applications, 247,589 ; number of positions filled, 131,799.

(ii) *Vocational Training.* Number of men completed training, 26,212 ; number in training, 867.

(iii) *Assistance other than Vocational Training and Employment.* Applications received, 619,549 ; applications approved, 538,106.

(iv) *Soldiers' Children's Education Scheme.* From the inauguration of the scheme in February, 1921, up to 31st December, 1925, 7,120 applications for assistance had been received. Of these 6,041 had been approved of, which 1,222 recipients of the benefits had completed their training, 88 applications were pending, and the remainder had been refused or withdrawn.

It is estimated that the scheme will involve an outlay of £1,250,000, of which the Commonwealth has undertaken to provide £800,000, while it is hoped that the balance will be forthcoming from private and public funds and benefactions. Up to 31st December, 1925, the expenditure was £384,082.

(v) *Assistance Granted.* The total expenditure incurred during the period 8th April, 1918, to 31st December, 1925, was £14,538,000, of which £8¾ millions represented gifts, £1½ millions loan, and over £4 millions general expenditure. Of the total the largest amounts were absorbed by vocational training, with £5 millions, and expenses of providing employment, £2½ millions.

4. Settlement of Soldiers on the Land.—At the Premiers' Conference in Melbourne in 1917 it was agreed that the States should undertake the work of settling on the land returned soldiers and munition and war workers, but that the Commonwealth should finance them for this purpose.

The original arrangement provided that the Commonwealth should take the responsibility of finding up to £500 per settler as working capital for improvements, implements, seed, etc., an amount which was subsequently increased to £625 per settler, together with £375 per settler for resumptions and works incidental to land settlement approved by the Commonwealth. Particulars of the advances to the States are shown in the following table :—

ADVANCES TO STATES FOR SOLDIER SETTLEMENT, AT 30th JUNE, 1925.

State.	No. of Settlers.	Advances agreed upon.	Advanced during 1924–25.	Advanced to 30th June, 1925.	Advances outstanding 30.6.25.
	No.	£	£	£	£
New South Wales ..	8,405	12,254,191	..	9,826,203	9,805,984
Victoria..	11,000	15,708,514	..	11,968,176	11,794,075
Queensland	3,898	3,290,789	*Dr.* 61,754	2,717,697	2,700,583
South Australia	5,000	6,265,471	..	2,857,780	2,833,005
Western Australia ..	5,186	6,278,750	..	5,463,782	5,431,202
Tasmania	2,821	3,521,234	..	2,168,303	2,129,563
Total ..	36,310	47,318,949	*Dr.* 61,754	35,001,941	34,694,412

Prior to the occupancy of the land, the Repatriation Department was empowered to pay sustenance for a limited period, subject to certain conditions, also for 6 months during the first 2 years of occupancy while awaiting production.

5. Conspectus of State Laws affecting Settlement of Returned Soldiers on the Land.—In Official Year Book No. 13, pp. 1018 *et seq.*, will be found a table giving particulars of the laws of the various States relating to returned soldiers' land settlement.

Later modifications have been made with a view to simplifying procedure and liberalizing the conditions under which holdings may be acquired.

§ 11. War Service Homes.

The operations of the War Service Homes Commission at 28th February, 1926, may be briefly set out as follows:—29,819 applications involving advances amounting to approximately £19,719,398 had been approved; 14,366 houses had been completed; 128 applicants had been assisted to complete or enlarge dwelling-houses partly owned; 757 houses were in course of construction; and 630 building applications had been approved in respect of which building operations had not been commenced.

In addition, the Commission had purchased on behalf of eligible applicants 12,069 already-existing properties, and had taken over mortgages existing on 1,916 dwelling-houses, but in a number of cases actual settlement and transfer have not taken place. Applications in respect of 47 completed houses had not, however, been definitely approved, but pending this action the majority of the houses are occupied by the applicants under a weekly tenancy agreement.

The foregoing figures include the operations of the State Bank of South Australia, which is now carrying out the provisions of the War Service Homes Act in South Australia, the Commonwealth's obligations being to make available to the Government as a loan the funds required for the purpose.

CHAPTER XV.

THE TERRITORIES OF THE COMMONWEALTH.

A. GENERAL.

1. **Classification.**—The Territories of, or under the control of, the Commonwealth are of three classes—

(*a*) Territories originally parts of the States which have been surrendered by the States to the Commonwealth. These are the Northern Territory (formerly part of the State of South Australia) and the Federal Capital Territory (formerly part of the State of New South Wales).

(*b*) Territories, not parts of States, which have been placed under the authority of the Commonwealth by Order in Council under section 122 of the Constitution. These are Papua and Norfolk Island.

(*c*) Territories which have been placed under the administration of the Commonwealth by Mandate issued by the League of Nations. These are the Territory of New Guinea and (administered in conjunction with the British and New Zealand Governments) Nauru.

The Territories in class (*a*) only are parts of the Commonwealth.

2. **Forms of Executive Government.**—The Territories differ in their forms of Government. Papua is administered by a Lieutenant-Governor and a nominated Executive Council, who, except in matters of high policy and in certain matters prescribed by law, are not controlled by the Commonwealth Government. Norfolk Island and the Territory of New Guinea are each under an Administrator who is controlled by the Commonwealth Government; and in each of these Territories there is an Advisory Council. The Northern Australia Act 1926 divides the Northern Territory into two parts, one comprising the area north of the 20th parallel of South latitude, and the other the area south of that line. The Act provides for a Government Resident in each part and for a Development Commission for the part north of the 20th parallel. In the Federal Capital Territory some local institutions under the law of New South Wales continue, otherwise the Federal Capital Commission has definite responsibilities in regard to the government. In Nauru the Executive Government is vested in an Administrator who is subject only to the general control of the Government controlling the Administration.

3. **Legislative Power.**—The laws of the Parliament of the Commonwealth are in force in the Territories which are parts of the Commonwealth, but are not applicable to the Territories not parts of the Commonwealth, unless expressly extended thereto.

In Papua, there is a nominated Legislative Council, which has full power of legislation, subject to the assent of the Governor-General. In New Guinea, the Northern Territory, Norfolk Island and the Federal Capital Territory, there are no Legislative Councils, and Ordinances are made for these Territories by the Governor-General, subject to such Acts of the Parliament of the Commonwealth as are in force there.

In Nauru the legislative power is vested in the Administrator, subject to instructions from the Government controlling the Administration.

4. **Laws.**—In the Northern Territory, Papua and Norfolk Island, the laws existing at the dates when these territories came under the control of the Commonwealth have remained in force, subject to later legislation by or under the authority of the Commonwealth Parliament; in the Federal Capital Territory there still remain in force some of the laws of the State of New South Wales; in New Guinea, the former German law was repealed at the date of the establishment of civil government.

Three volumes containing the "Statute Law of the Territory of Papua" in force on 31st December, 1916, were published by the Government Printer, Port Moresby, in 1918 and 1919; subsequent Ordinances and the regulations under Acts and Ordinances are published in the *Government Gazette* of Papua and in annual volumes. The South Australian statutes in force in the Northern Territory will be found in the collected editions and annual volumes of the State of South Australia: Ordinances made by the Governor-General are published in the *Commonwealth of Australia Gazette*, and regulations under

Ordinances in the *Northern Territory Gazette.* The laws in force in Norfolk Island at the time of its coming under the control of the Commonwealth were collected in the *New South Wales Government Gazette* of 24th December, 1913, and printed separately as "The Consolidated Laws of Norfolk Island"; Ordinances made by the Governor-General and regulations made by the Administrator, are published in the *Commonwealth of Australia Gazette.* Ordinances made by the Governor-General for the Federal Capital Territory are published in the *Commonwealth of Australia Gazette.* Ordinances made by the Governor-General for the Territory of New Guinea are published in the *Commonwealth of Australia Gazette*, and regulations made by the Administrator in the *New Guinea Gazette*; the statute law in force in New Guinea on 31st December, 1925, has been published as Vols. I.–IV. of "Laws of the Territory of New Guinea," and subsequent Ordinances and regulations will be collected in annual volumes. Ordinances made by the Administrator of Nauru are promulgated locally and are printed in the annual report to the League of Nations on the Administration of Nauru.

5. **Finances.**—Papua is autonomous in its finances, but receives an annual grant from the Commonwealth Government. The Administration of the Northern Territory is maintained by the Commonwealth Government; a grant is made towards the expenses of administration of Norfolk Island, but taxes are raised locally which meet part of the expenditure; expenditure in the Federal Capital Territory is defrayed by the Commonwealth; New Guinea has its own budget, and the local revenues have hitherto been sufficient to maintain the Administration; Nauru is self-supporting.

The sum expended by the Commonwealth Parliament in 1924–25 for the Territories outside the Commonwealth was £84,803, exclusive of £52,834 for mail services to these Territories and to other islands in the Pacific.

B. THE NORTHERN TERRITORY.

§ 1. Area and Population.

1. **Introductory.**—Upon the extension of New South Wales westward to the 129th meridian in 1827, the Northern Territory was incorporated in that colony (see Chapter I.), and in 1863 was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1st January, 1911.

2. **Area and Boundaries.**—The total area of the Territory is 523,620 square miles, or 335,116,800 acres. Its length from north to south is about 900 miles, while its breadth from east to west is 560 miles. Its eastern boundary, dividing it from Queensland, is the 138th meridian of east longitude; and its western boundary, separating it from Western Australia, the 129th meridian. Its southern boundary is the 26th parallel of south latitude, dividing it from South Australia. The northern boundary is the coast line of those parts of the Indian Ocean known as the Timor and Arafura Seas. Near the mouth of the Wentworth River, in the Gulf of Carpentaria, the coast line is met by the eastern boundary; at Cape Domett, near Cambridge Gulf, the western boundary cuts the northern coast line. The length of coast line is about 1,040 miles, or 503 square miles of area to one mile of coast line.

3. **Population.**—(i) *Europeans.* The problem of increasing the European population of the Northern Territory is one of considerable difficulty. Its solution will, of course, depend on the economic development of the country, and past experience tends to show that the task of developing its resources will involve large expenditure. At the Census taken in 1881 there were only 670 Europeans in the Territory. The total increased slowly, reaching its maximum in 1919 with 3,767 persons. Owing mainly to the closing down of the meat works at Darwin a decline then took place, and at the Census taken in 1921 the white population had decreased to 2,459, while at the end of 1925 it was approximately 2,356. During the year 1924–25 the number of births equalled that of deaths, the total in each case being 20, while the number of arrivals exceeded that of departures by 116.

(ii) *Asiatics.* With the exception of a few Japanese, Filipinos and others, the Asiatics in the Northern Territory consist mainly of Chinese. The South Australian Government introduced 200 Chinese in the early seventies to assist in the promotion of agriculture.

while the discovery of gold resulted in many others coming on their own account. Their numbers increased considerably in connexion with the construction of the railway from Darwin to Pine Creek, in 1887–88, and there were at that time upwards of 4,000 Chinese in the Territory. The total gradually dwindled thereafter, and the number at the Census of 1921 was only 722. The total number of all non-European persons (excluding Aboriginals), is approximately 1,050.

(iii) *Total Population.* The highest recorded population of all races, except aboriginals, was 7,533 in 1888, at the end of 1925 it was 3,656. The estimated population for the last five years is given in the following table :—

NORTHERN TERRITORY.—POPULATION (EXCLUSIVE OF ABORIGINES), 1921 TO 1925.

Year.	Males.	Females.	Total.
1921	2,718	1,016	3,734
1922	2,540	1,011	3,551
1923	2,527	1,028	3,555
1924	2,538	1,059	3,597
1925	2,550	1,106	3,656

The Census population (4th April, 1921) was 2,821 males, 1,046 females, total, 3,867.

(iv) *Movement of Population.* The following is a summary of movement of population in 1925 (excluding overland migration) :—

NORTHERN TERRITORY.—MOVEMENT OF POPULATION, 1925.

Inwards	567	Outwards ..	511	Excess of immigration over emigration ..	56
Births	65	Deaths ..	62	Excess of births over deaths ..	3
Increase ..	632	Decrease ..	573	Net Increase ..	59

The immigration and emigration of the Territory for the five years ending in 1925 are shown in the following table :—

NORTHERN TERRITORY.—MIGRATION, 1921 TO 1925.

Year.	Immigration.	Emigration.
1921	516	770
1922	406	599
1923	438	468
1924	496	467
1925	567	511

With the exception of the last two years, when there was a slight gain, the figures show a net loss by migration.

(v) *The Aboriginals.* A special article contributed by Dr. W. Ramsay-Smith on the subject of the Australian aboriginals, was incorporated in Year Book No. 3 (pp. 158–176). It deals with such matters as theories of origin, physical characteristics, manners, customs, religion, etc. The chapter "Population," in Year Book No. 17, contained information regarding (*a*) the efforts made from time to time, in the various colonies, to arrive at the number and distribution of aboriginals; (*b*) their approximate number at the taking of the Census in 1921, and (*c*) measures taken by the States (in the case of the Northern Territory, by the Commonwealth) to protect and preserve the aboriginals. In the Northern Territory large numbers of the aboriginals are still outside the influence of Europeans. At the last Census, 2,050 full-blood aboriginals, in the employ of whites or living in the vicinity of European settlements, were enumerated. Of these 1,184 were males and 866 females. The total number of aboriginals in the Territory at 30th June, 1925, was estimated at 19,760. The greatest difficulty which confronts the Administration in dealing with the natives is due to the circumstance that they are nomads, without fixed abode, merely wandering about hunting for native food within the limits of their tribal boundaries, and making no attempt at cultivation or other settled industry. In their natural state, compared with those of other tropical countries, the natives are very healthy, but in contact with new settlers, white or Chinese, they rapidly fall victims to disease, and to degradation from drink or opium.

§ 2. Legislation and Administration.

1. **Transfer to Commonwealth.**—(i) *The Northern Territory Acceptance Act.* A short historical sketch is given in Year Book No. 6, pp. 1113–4. On 1st January, 1911, the Territory was transferred by South Australia to the Commonwealth, upon terms previously agreed upon by the respective Cabinets, and ratified by the Commonwealth *Northern Territory Acceptance Act* (No. 20 of 1910). The terms were outlined in Official Year Book No. 15, page 940.

(ii) *The South Australian Surrender Act.* The State Act approved and ratified the agreement surrendering the Territory.

2. **Administration.**—(i) *The Northern Territory (Administration) Act, 1910.* The Act provided for the appointment of an Administrator and officials. South Australian laws were declared to continue in force as laws of the Territory, and certain Commonwealth Acts to apply. Power was given to the Governor-General to make Ordinances having the force of law.

(ii) *Northern Australia Act, 1926.* As stated previously, the Territory is divided under this Act into two parts separated by the 20th parallel of south latitude, each to be administered by a Government Resident, while, in addition, a Development Commission is provided for the northern portion.

(iii) *Northern Territory Ordinances.* In Official Year Book No. 18, pp. 619-20, a summary was given of the main provisions of the Ordinances passed up to June, 1924, but limitations of space preclude the repetition of this information.

3. **Representation in Commonwealth Parliament.**—Section 122 of the Commonwealth Constitution provides that "the Parliament may make laws for the government of any territory . . . and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit." In pursuance of this provision an Act was passed in 1922 whereby the Northern Territory elects a member to the House of Representatives. As this member represents a very small number of electors, he is not entitled to vote, but may take part in any debate in the House.

§ 3. Physiography.

1. **Tropical Nature of the Country.**—The Territory is within the torrid zone, with the exception of a strip 2½ degrees wide, which lies south of the Tropic of Capricorn.

2. **Contour and Physical Characteristics.**—The low flat coast line seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl, and ironstone form the occasional cliffy headlands. The sea frontage of more than 1,000 miles is indented by bays and inlets, and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries.

The principal features of the coast line are enumerated in Year Book No. 1, p. 66; the rivers in Year Book No. 2, p. 76; the mountains in Year Book No. 3, p. 67; the lakes in Year Book No. 4, p. 77; the islands in Year Book No. 5, pp. 71, 72, and the mineral springs in Year Book No. 6, p. 65.

Inland, the country generally is destitute of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the 17th or 18th parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply of the interior systems. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

§ 4. Climate, Fauna and Flora.

1. **The Seasons.**—There are two main climatic divisions—the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly the whole of the rainfall occurs in the summer months. Fuller particulars will be found in Year Book No. 6, p. 1116.

2. **Fauna.**—The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous), and frogs abound. There are many varieties of freshwater fish and littoral mollusca. Butterflies and beetles are strongly represented. The white ant is a pest, anthills in the Territory sometimes attaining great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Native fauna are in some cases protected. Buffalo formerly existed in large herds, but their numbers have been greatly reduced by indiscriminate shooting in recent years.

3. **Flora.**—The vegetation is North Australian in type, but a number of the forms belong to the Malayan and Oceanic regions. The timber trees are not of great commerical value, but in the coastal regions tropical vegetation grows luxuriantly to the water's edge. On the wide expanses of plain country in the interior there is little vegetation. The principal orders represented in the Territory are:—*Euphorbiaceæ, Compositæ, Convolvulaceæ, Rubiaceæ, Goodenoviaceæ, Leguminosæ, Urticeæ.*

Fuller particulars regarding fauna and flora are given in Year Book No. 6, pp. 1116–7.

§ 5. Production.

1. **Agriculture.**—Up to the present agriculture has made little progress in the Territory, although it has been proved that rice, tobacco, coconuts, mangoes, cotton, various fodder plants, and peanuts can be successfully grown. Expense of harvesting is, at present, an obstacle to the economic production of rice, and until labour-saving machinery is procured it cannot be produced with profit. Some 5 miles from Darwin a coconut plantation, about six acres in area, is thriving, and at a small plantation at Shoal Bay the palms planted along the sea-shore are giving excellent results. There is a large stretch of first-class coconut land on the coast, but hitherto planting has not been attempted on a commercial scale. Cotton was planted in 1924 by settlers at Stapleton, Grove Hill, Daly Rivers, Pine Creek, and the Katherine, and there were experimental plots at Mataranka, Borroloola, and on the lower Roper River. The season, however, was unfavourable, owing to inadequate and badly distributed rainfall, and the year's crop amounted to only 7,000 lb. of seed cotton. In 1925, 123 acres were planted with

cotton, and between 70 and 80 acres germinated. The crop was about 27,000 lb. About 70 acres were planted with peanuts, and about 24 tons were harvested. Fodder plants are not grown to any great extent. On the Katherine River experiments made with lucerne showed that, with irrigation and good farming, this useful fodder plant may be established. A Primary Producers' Board, supported by the Government, was founded in 1923, with the object of relieving distressed settlers, and a small number of families has been settled on land suitable for agriculture.

2. **Pastoral Industry.**—The pastoral possibilities of certain parts of the Northern Territory were recognized at an early date, and in 1866 stock was brought into the Macdonnell Range country from South Australia. Six years later cattle were brought from Queensland to the northern parts of the Territory, and in 1879 Mr. Giles reached the Katherine River with 2,000 head of cattle and 12,000 sheep from South Australia. For various reasons sheep-raising did not succeed. It is, however, hoped that with a more regular supply of artesian and sub-artesian water, and the building of railways, parts of the Territory will become profitable sheep country. The cattle industry progressed slowly, and the number of cattle on 31st December, 1924, was about 855,300. A great impetus was given to this industry in 1917 by the opening of extensive meat works at Darwin. Unfortunately the works closed down in 1920, but they were partly reopened in 1925, and up to the end of June 4,630 head of cattle had been treated. The number of cattle exported by land during the year 1924–25 was 42,426, compared with 76,510 during the previous year, and that of horses about 1,400. The cattle industry has been retarded by the ravages of ticks and by the difficulty of travelling stock through waterless country. These difficulties are, however, gradually being overcome, the former by the introduction of the practice of "dipping," and the latter by adding to the number of wells on the various stock-routes and the creation of stock reserves. Horses thrive well, and in 1924 numbered about 45,000. Buffaloes thrive in the coastal districts, but their number has been greatly reduced through indiscriminate shooting for the sake of the hides, of which 6,152 were exported during 1924–25.

The estimated number of live stock in the Territory at various periods is given in the table hereunder :—

NORTHERN TERRITORY.—LIVE STOCK, 1910, 1915, AND 1921 TO 1924.

Year.	Horses.	Cattle.	Sheep.	Pigs.	Goats.	Camels.
1910	24,509	513,383	57,240	996	..	..
1915	19,957	483,961	57,827	500	..	..
1921	39,565	568,031	6,349	452	19,385	494
1922	39,845	760,766	6,161	361	18,086	470
1923	44,603	843,718	4,728	647	25,647	579
1924	45,059	855,285	6,914	1,000	30,000	1,000

3. **Mining.**—(i) *General.* Alluvial gold-digging in the Northern Territory commenced in 1869, and up to the end of 1880 gold to the value of £79,022 had been produced. In 1881 the gold production reached its maximum, the value for that year being £111,945. During the following years it fluctuated considerably, but as long as the alluvial deposits lasted the output was satisfactory. In the transition period from alluvial to reef mining the industry declined considerably, and the output dwindled from year to year, reaching its lowest ebb in 1921–22, when the value amounted to only £540. The production of metals other than gold has suffered from vagaries of prices, and from the disadvantages of high cost of transport and of white labour. The year 1924–25 showed a decline from the previous year in regard to gold, but an increase in tin. Gold-mining was carried on chiefly at Fletcher's Gully, and tin at Marranboy and Mt. Wells. The number of gold-mining leases in existence on 30th June, 1925, was 28, comprising an area of 936 acres, and 33 mineral leases for 911 acres.

(ii) *Mineral Production.* The following table shows the total mineral production for the last five years :—

NORTHERN TERRITORY.—VALUE OF MINERAL PRODUCTION, 1919–20 TO 1924–25.

Year.	Gold.	Tin Ore.	Wolfram.	Silver-Lead Ore.	Copper Ore.	Mica.	Total Value all Minerals.
	£	£	£	£	£	£	£
1919–20	5,282	27,610	45,648	299	780	482	80,101
1920–21	1,299	7,793	9,752	..	..	159	19,003
1921–22	540	5,891	560	..	798	2,170	9,959
1922–23	743	13,887	18	..	30	1,926	16,612
1923–24	3,270	12,855	..	..	239	2,718	19,138
1924–25	1,939	15,966	..	617	15	2,835	21,715

(iii) *Coal and Mineral Oil.* At the end of the year 1924–25 an area of 41,603 square miles was held under coal and oil licences, but on 30th June, 1926, only 10 licences were in existence. Boring has been undertaken by a company at Elcho Island.

4. **Pearl, Trepang, and Other Fisheries.**—In 1884 mother-of-pearl shell was discovered in the harbour of Port Darwin. Difficulty in working, principally through heavy tides and muddy water, retarded the development of the industry for many years. Subsequently, however, the opening up of new patches led to a revival, but the outbreak of war gave the industry a setback, owing to the limited demand in the home markets. During 1924–25 pearl shell to the value of £2,070 was exported. The territorial waters teem with marketable fish, and, despite inadequate transport facilities, a commencement has been made with a trade in fish, dried or otherwise preserved. The export of dried fish in 1924–25 was valued at £1,485, and of trepang at £1,986.

§ 6. Land Tenure.

A description of the system of land tenure in force in the Territory will be found in Chapter V.—Land Tenure and Settlement.

§ 7. Commerce and Shipping.

1. **Trade.**—No record is kept of the direction of trade between the Commonwealth States and Territories. The value of the direct oversea trade for 1901 and for each of the years 1920–21 to 1924–25 is given hereunder :—

NORTHERN TERRITORY.—VALUE OF DIRECT OVERSEA TRADE, 1901 AND 1920–21 TO 1924–25.

Items.	1901.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£	£
Imports	37,539	19,857	12,115	12,804	14,432	20,636
Exports	29,191	14,752	5,036	14,627	8,000	41,944
Total ..	66,730	34,609	17,151	27,431	22,432	62,580

The principal items of overseas export in 1924–25 were cattle, £36,795; fish, £1,841; hides, £1,481; and meat, £1,344.

2. **Shipping.**—The Territory is dependent for its shipping facilities chiefly on the services of vessels trading between Sydney and Singapore. Other vessels make occasional visits, while a sixty-days' service between Fremantle and Darwin is carried out by the "Bambra," belonging to the West Australian State Shipping Service.

NORTHERN TERRITORY.—SHIPPING, 1920–21 TO 1924–25.

Period.	Arrivals.		Departures.	
	No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.
1920–21	30	65,301	30	65,398
1921–22	32	93,421	30	84,835
1922–23	37	99,955	37	99,955
1923–24	35	96,099	34	96,004
1924–25	56	124,715	52	124,564

The foregoing figures are exclusive of particulars of coastwise shipping. During 1924–25, 44 vessels of 877 tons net were entered as coastwise.

§ 8. Internal Communication.

1. **Railways.**—Under the agreement ratified by the Act, the Commonwealth is to construct the Northern Territory portion of the transcontinental railway line (connecting Adelaide and Darwin, via Port Augusta).

The Northern line from Adelaide terminates at Oodnadatta, about 100 miles south of the southern boundary of the Territory. The only line at present in the Territory is one from Darwin to Emungalan, Katherine River, a length of 198.68 miles, of 3 ft. 6 in. gauge. The construction of the section between Emungalan and Daly Waters has been authorized by the Commonwealth Government at a cost not to exceed £1,545,000, and the work will be commenced at an early date. A railway bridge across the Katherine River has been completed. The completion of the remainder of the gap would permit of the development of the broad belts of pastoral and mineral country towards the centre of Australia. The Commonwealth also acquired on 1st January, 1911, the property in the line from Port Augusta to Oodnadatta (478 miles). The extension of this line to Alice Springs has been authorized by Parliament.

2. **Posts.**—Postal communication is maintained by vessels belonging to Burns, Philp and Co., which maintain a monthly service between the Territory and the Eastern States. In addition, the vessels belonging to the State Steamship Service of Western Australia give a service once every 60 days between Fremantle and Darwin. Inland, the northern part of the Territory receives its mail via Darwin, while the southern districts are served via Adelaide.

3. **Telegraphs.**—The transcontinental telegraph line, covering a length of 2,230 miles, was completed on the 22nd August, 1872, at a cost of nearly half-a-million sterling. The line runs in a northerly direction from Adelaide to Darwin, whence telegraphic communication is provided with Asia and Europe, via Banjoewangie (Java), Singapore, and Madras. Between Darwin and Banjoewangie the submarine cable is duplicated.

High-power wireless stations have been constructed by the Federal Government at Wave Hill, in the Territory, and at Camooweal, just over the eastern boundary, in Queensland.

§ 9. Finance.

1. **Revenue and Expenditure, 1924–25.**—In the Commonwealth finance statements separate accounts are given for Northern Territory administration. Receipts and expenditure for 1924–25 are given below:—

REVENUE AND EXPENDITURE.—NORTHERN TERRITORY, 1924–25.

REVENUE.	£	EXPENDITURE.	£
Customs and Excise ..	5,191	Salaries and Contingencies ..	115,642
Postal, Telegraph, and Telephone	8,274	Northern Territory Railways	39,421
Darwin-Katherine River Railway	29,106	Melbourne Administrative Services	4,294
Territorial	21,243	Interest and Sinking Fund, Northern Territory Loans ..	119,388
Land and Income Tax ..	3,519	New Works, Artesian Bores, Roads, etc.	16,613
Quarantine	37	Miscellaneous, Maintenance, and Repairs	43,941
Lighthouses and Light Dues ..	484		
Stamp Duties	1,271		
Miscellaneous	12,687		
Deficiency on year's transactions	257,487		
Total	339,299	Total	339,299

2. **Northern Territory Debt.**—The items making up the total debt of the Territory as at 30th June, 1925, are as follows:—

	£	£
Debt at date of transfer to the Commonwealth, 1st January, 1911		3,931,086
Redeemed under Commonwealth Loan Acts ..	2,277,917	2,738,667
Redeemed from Consolidated Revenue ..	460,625	
Reedeemed from Sinking Fund	125	
Balance, 30th June, 1925		1,192,419

In addition, the balance of the Port Augusta–Oodnadatta Railway Loans taken over from South Australia amounted at the same date to £1,077,678, making a total of £2,270,097. Under the provisions of the "Northern Territory Acceptance Act, 1910," a sinking fund has been established in connexion with the transferred loans.

C. THE FEDERAL CAPITAL TERRITORY.

1. **Introductory.**—In Year Books Nos. 4 and 5, information was given in Section XXXI., in regard to the events leading to the selection of the Federal Capital Territory, and the necessary legislation and the progress of operations in connexion with the establishment of the capital city. The physiography of the Territory was dealt with *in extenso*, and topographical and contour maps accompanied the letterpress, as well as reproductions of the premiated designs for the laying out of the city. Considerations of space, however, preclude the repetition of this information. On the 12th March, 1913, the official ceremony to mark the initiation of operations in connexion with the establishment of the Seat of Government was carried out. At this ceremony the selection of "Canberra" as the name of the capital city was announced.

2. **Administration.**—In Year Book No. 18 a summary was given of the development of the administration up to the taking over of the control of the Territory by the Federal Capital Commission.

This Commission consisting of the following three members—

J. H. Butters, Esq., C.M.G., M.B.E., Chief Commissioner,
Sir John Harrison, K.B.E., and
C. H. Gorman, Esq.,

has been administering the affairs of the Territory since the beginning of 1925. The Commissioners have been appointed for terms of five years, four years and three years respectively, in accordance with the provisions of the *Seat of Government (Administration) Act* 1924. This Act defines the powers and functions of the Commission, which include the control and management of lands, the carrying out of works and building construction, and, generally, the municipal government of the Territory. Subject to Parliamentary and Ministerial authority, it has been empowered to raise loans for all the purposes of its administration.

The Departmental association with the administration of the Territory has therefore become limited to the general authority of the Minister for Home and Territories, and responsibility of the Department of Works and Railways to assist when required in the designing and construction of works and buildings.

In May, 1926, it was resolved that Parliament should meet at the Seat of Government, Canberra, on 9th May, 1927.

The activities of the Commission have, therefore, been augmented, and a definite programme is being carried out so that all necessary preparatory constructional work shall be accomplished in readiness for the opening of Parliament and its permanent establishment.

The preparation and promulgation of Ordinances necessary for the government of the Territory is proceeding, as it has been found expedient to replace in several respects the already obsolete State law still in force.

3. **Progress of Work.**—The general progress of the work of construction up to the time when the Territory was taken over by the Commission was outlined in Year Book No. 18. The Commission has continued the policy of developing the city according to the approved plan, and is devoting itself primarily to the completion of the basic engineering services and the official and residential accommodation necessary to enable the Seat of Government to be transferred, and to enable a nucleus of the Departments of the Public Service to function after the transfer.

The construction of main avenues and roads according to the approved plan has been effected. Many miles have been formed, and a considerable portion metalled or gravelled. Surface treatment has been undertaken on certain arterial roads in the city area.

Residential areas are being laid out at Ainslie, Blandfordia, Telopea Park, Manuka and Eastlake ; and business sites have been made available for private enterprise at Ainslie, Eastlake and Manuka. Rapid progress has been made with the engineering services such as roads, sewerage, and drainage. The water supply and sewerage have been so arranged as to connect up with the main city services when completed. Water supply service reservoirs have been provided on Red Hill and Mount Russell, and mains through the city are being laid as required. The outfall sewer is completed, and the main intercepting sewers within the city boundary are under construction. The southern intercepting sewer has been completed, and the northern intercepting sewer, the fourth section of the main sewerage scheme of the city and which is to run under the River Molonglo, should be completed before the end of 1926. The sewerage disposal works are in progress at Western Creek, about six miles from the city. Electric lighting and power services have been extended to serve the residential districts and areas where various construction works are proceeding, many miles of transmission line having been erected. Fire services have been provided for the protection of buildings and depots. The Molonglo River Bridge on Commonwealth-avenue is being extended by an additional span, and a low-level bridge has been constructed at Acton, which for a few months has served as the only connexion between the north and south sides of the city. The capacity of the power house is 1,350 kilowatts, and electrical energy is conveyed to the various factories where the manufacture of bricks, tiles, joinery, cement products, and other requirements is carried on.

Excavation of the site for Parliament House was commenced towards the end of 1923, and the actual construction was begun in January, 1924. Satisfactory progress is being maintained with the object of its completion at the end of 1926. The Australian sculptor, Sir Bertram Mackennal, is executing a life size statue of His Majesty the King to be placed in the main hall of Parliament House.

A departure from the scheme prepared by the Federal Capital Advisory Committee was approved in the case of offices for the Central Administration of Commonwealth Departments, a permanent building being decided upon instead of a group of structures of a provisional nature. As a result of an architectural competition a design has been selected for this building, which, it is anticipated, will be in course of construction during the latter half of 1926. As its completion before 1930 is not practicable, the sectional staffs of the various Departments will be housed in the Secretariat building, which is practically complete, and part of Hotel Kurrajong, which will be utilized temporarily for that purpose. The construction of additional public offices, on the north-western side of Parliament House was commenced in May, 1926 ; in this building accommodation will be reserved for the National Library.

A Government Printing Office has been erected, and accommodation for an Automatic Telephone Exchange and a Central Post Office has been provided for in the Secretariat building.

A competition for Australian architects within the Empire is being conducted, and proposals are being developed for the erection of a monumental structure as a National War Memorial Museum at the foot of Mount Ainslie.

Accommodation for visitors has been provided for by the erection of two hotels (Hotel Canberra and Hotel Ainslie). The former, which was opened during Christmas of 1924, is situated near the Governmental area, and has accommodation for 200 guests ; the latter can accommodate 80 guests. Two additional hotels (Hotel Acton and Hotel Kurrajong) will be available before the end of 1926. Further provision is being made for the accommodation of civil servants and guests by the erection of four boardinghouses, which were commenced in June, 1926, at Ainslie, Acton, Telopea Park and Blandfordia centres.

Satisfactory progress has been made in the erection of the official residence for the Prime Minister and with the alterations to Yarralumla Homestead adapting it for use temporarily as a Government House.

The provision of other residential accommodation is increasing in the various localities. Over 170 cottages (mostly of brick) have been completed by the Commission, and 45 are under construction. An additional 300 cottages are also in course of construction by contractors in accordance with a wide range of standard designs.

The problem of accommodation for workmen during the period of initial construction has been met, to a certain extent, by the erection of 186 portable wooden cottages in areas adjacent to the sites of the main building operations. Single men are accommodated in the bachelors' quarters, messes, and camps.

Since 1920 steady progress has been made in the planting of belts of trees for shelter, and of various city parks, The formation of avenues and streets and other ornamental features has been carried out, as well as a large amount of afforestation work on the outskirts of the city. Work in this direction is still proceeding concurrently with the formation of roads and the development of the various areas. The layout of the grounds of Parliament House is proceeding satisfactorily, while already the gardens at two of the hotels and in the residential areas are thriving. The layout in front of the cottages provides for a continuous street garden in the suburbs which have already been established.

A hall accommodating about 600 people has been built at The Causeway, the work being performed by voluntary labour.

The public abattoirs, constructed to meet the requirements of a population of 10,000. will be in active operation during 1926.

The activities undertaken by private enterprise during the year comprise the erection of half a dozen shops at Eastlake, the construction of an up-to-date steam laundry, a printing works, and two modern bakeries at Ainslie, and 13 cottages on the north side, and 43 on the south side of the river.

Provision has been made for the maintenance of roads, buildings and other services in the Territory, and many works and buildings of a minor character have been constructed.

The proposal to dam the waters of the Molonglo River near Yarralumla for the formation of part of an ornamental lake system was referred to the Parliamentary Standing Committee on Public Works, who decided that the construction of the dam should be postponed, as it was not an immediate necessity.

4. **Lands.**—(i) *In the Federal Territory Proper.* Reference has been made in Chapter V. to the general conditions of land tenure in the Territory for the Seat of Government, and to the area of alienated and leased land.

As considerable portions of the Territory lands are not required in connexion with the establishment of the city, large areas have been leased under special improvement conditions in regard to the extermination of noxious weeds, and the destruction of rabbits and other noxious animals. The lands are classified into three grades of agricultural and three grades of grazing land. About 158,000 acres comprising 350 leases are at present held under lease for periods varying from quarterly tenure to 25 years.

The first auction sale of City leaseholds was held on the 12th December, 1924, and 289 residential and 104 business sites were offered at Eastlake, Manuka Centre, Blandfordia, Red Hill, Civic Centre and Ainslie. Of these, 146 blocks were immediately disposed of at prices averaging from £6 to £58 per foot for business sites, and from 10s. to £3 4s. per foot for residential sites. Of the remainder, 149 blocks (including all the business sites offered) were sold subsequently. A further 64 residential blocks in the original subdivisions offered were withdrawn from lease and are being built upon by the Commission for the housing of public servants.

In view of the demand for business sites, a further 18 business and 80 residential sites were offered for lease by public auction on the 29th May, 1926, and the whole of the business sites were sold at prices varying from £24 to £150 per foot. Of the residential sites offered, 21 were sold at the day of auction and a further 20 were sold up to the 30th June, 1926.

The lease of a site for an Amusement Hall at Manuka Centre was sold by public auction on the 10th February, 1926, for £7,000, representing approximately £54 per foot.

Under the terms of the City Leases Ordinance, each block is leased for a period of 99 years at a rental of £5 per centum per annum of the unimproved capital value as assessed by the Commission or bid at auction.

The terms of the lease require the purchaser of all business sites to commence the erection of a building on the site leased before the 31st December, 1926, and to complete it before the 31st December, 1927. In the case of the residential sites the lessee is required to commence the erection of a building on the site within one year and to complete it within two years from the date of the purchase.

Designs for the buildings are governed by Regulations, and leases are not transferable until buildings have been erected on the land as prescribed or where the Commission is satisfied that a building is being or about to be erected on the land.

(ii) *Land at Jervis Bay.*—The Commonwealth has acquired from the State of New South Wales sovereign rights over the area comprising about 28 square miles of land and water at Jervis Bay for possible use as a port in connexion with the Federal Capital. The Royal Australian Naval College has been established in this area on a site known as Captain's Point, and portions of the remaining lands have been leased.

5. **Railways.**—Canberra is connected with the railway system of New South Wales by a line 4¾ miles long to Queanbeyan. This line was opened for goods traffic on the 25th May, 1914, and for passenger traffic on the 15th October, 1923, and is being worked by the New South Wales Railway Commissioners for and on behalf of the Commonwealth.

A public railway station has been established at Eastlake, near the Power House, and is the terminus of the existing line. An extension to the Civic Centre (2½ miles) was constructed, and was temporarily in use, but the destruction of a bridge over the Molonglo River put the line out of action for the time being.

A daily passenger and goods service is in operation from Queanbeyan to Canberra, and special sidings have been constructed for use by contractors. At Molonglo Settlement, where many employees of the Commission are housed, a two-carriage platform has been constructed.

A trial survey of the Canberra–Jervis Bay line has been completed, and plans have been prepared to enable an estimate of the cost of the line to be obtained.

Under the provisions of the Seat of Government Surrender Act 1909 of New South Wales, and the Seat of Government Acceptance Act 1909 of the Commonwealth, an agreement exists between the Commonwealth and the State of New South Wales in relation to the construction of a railway from Canberra to Yass—a distance of, approximately, 43 miles, of which about 32 miles extend through New South Wales. The State is required to construct its portion of the line as soon as the Commonwealth builds a line to the boundary of the Territory.

The permanent survey of this line has been completed, and the proposal has recently been the subject of an enquiry by the Commonwealth Public Works Committee, whose report thereon is now under consideration.

6. **Population.**—The estimated population on the 31st December, 1925, was 4,927 in the Federal Capital Territory, and 582 in Jervis Bay Territory.

7. **Live Stock.**—The live stock, according to the latest return, comprises :—Horses, 1,035 ; cattle, 5,199 ; sheep, 194,817.

8. **Educational Facilities.**—Arrangements have been made with the New South Wales Education Department to continue for the time being the administration of education in the Territory, the expenditure involved being refunded annually by the Commission to the State. Including the school at Jervis Bay there are fourteen schools conducted in the Federal Territory by the New South Wales Education Department.

The policy has been adopted of concentrating a number of scholars in a large central school where better facilities and a more efficient staff may be obtained than would be possible in small isolated schools each under the control of one teacher. The main public school at Telopea Park has now accommodation for 500 scholars, and its curriculum covers the stages from the primary to school-leaving standard. The Commission conveys scholars to this school from the various centres.

Schemes are being developed for the establishment of an Infants School, a Junior Technical School, a Trades School, and a Domestic Science School at Telopea Park, in addition to an extension to accommodate double the present attendance, as well as Primary and Infants Schools at Ainslie. To meet the requirements of the immediate future, public secondary education will be concentrated at Telopea Park. A report by a Committee of experts upon a University scheme has been considered by the Commission and submitted to the Government.

A private primary and secondary school for girls was opened at Canberra in June, 1926, utilizing as a temporary building the old Rectory at Ainslie. It is anticipated that other private educational institutions will be established in the near future.

9. **Social Service.**—During 1925, the Commission inaugurated a social service movement aiming at co-operation in social activities between the Commission and the citizens of Canberra. The organization which is now in active operation embraces seven District Associations, while four others are in process of formation. Committees dealing with Libraries, Indoor Recreation, Outdoor Recreation, Women's and Children's Welfare, Children's Recreation, and Education have been formed, and delegates to these committees and to the general Social Service Council are elected by the District Associations.

As a result of the movement a large Recreation Hall has been erected by voluntary labour, the Commission having supplied the material, while arrangements are in progress for the erection of another hall on a site north of the river. Playgrounds have been provided in two centres, and others will be established in the settled suburbs of the City area.

Under the auspices of the Association a magazine called " The Canberra Community News " is published monthly, and affords a convenient and attractive medium for the circulation of local news.

10. **Expenditure.**—(i) *General.* The capital expenditure on the Seat of Government during the period 1901–11 and in each year thereafter up to 30th June, 1924–5, was published in Year Book No. 18. Expenditure for the period 1924–25 amounted to £678,098, including £678,050 on construction, and £48 on acquisition of land.

(ii) *Details.* Details of expenditure for the year 1924–25 are given hereunder :—

FEDERAL CAPITAL TERRITORY.—EXPENDITURE, 1924–25.

Particulars.	Amount.	
	£	£
Buildings—		
Parliament House	164,510	
Administrative Offices	2,354	
Secretariat Offices	14,459	
Printing Office	201	
Cottages	49,769	
Commission Offices, Acton	12,774	
Hostels	112,013	
Primary Schools	7,077	
Canberra Hospital—Additions	1,115	
		364,272
Water Supply and Sewerage—		
Water Supply	9,501	
Sewerage	106,997	
Intercepting Channels	11,146	
		127,644
Roads and Bridges—		
Roads	74,548	
Bridges	11,145	
		85,693
Railways	*Cr.* 29	
Electric Light and Power (Power House and Mains)	4,064	
Recreation Grounds	5,034	
City Beautification, Parks, Etc. (Tree Planting)	10,201	
Miscellaneous Minor Works	8,298	
Manufacturing and Trading Account	2,984	
Stores Account	38,289	
Plant	11,541	
Suspense Account, Miscellaneous	*Cr.* 155	
Miscellaneous	20,214	
		100,441
Total		678,050

11. **Revenue.**—The revenue for the Federal Capital Territory for the year ended 30th June, 1925, was £90,476.

D. NORFOLK ISLAND.

1. **Area, Location,** etc.—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29° 3′ 45″ south, longitude 167° 58′ 6″ east. Its total area is 8,528 acres, the island being about 5 miles long and 3 miles wide. From Sydney it is distant 930 miles, and from New Zealand 400 miles. The coast line is 20 miles, and its form that of an irregular ellipse. Except on the south-west, inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between 56° and 82°, with a mean of 68°. The average annual rainfall is 55 inches. It has been said that the salubrious climate, coupled with the beauty of its land and sea scapes, should combine to render Norfolk Island "the Madeira of the Pacific." At present the island is visited annually by a fair number of tourists, but with improved shipping facilities the traffic would considerably increase.

2. **Settlement.**—The first colonization, in 1788, was by Lieutenant King, who in H.M.S. *Sirius* established a small penal station as a branch settlement of that at Port Jackson. The settlement was abandoned in 1813, and for 13 years thereafter its chief use was as a whaling station and place of call for British warships.

From 1826 to 1855 it was again made a penal station. In 1844 it was annexed to Van Diemen's Land (Tasmania).

The descendants of the *Bounty* mutineers, having become too numerous to subsist on Pitcairn Island, were removed thence to Norfolk Island in 1856. The new community numbered 193—94 males and 99 females—and were the descendants of British sailors and Tahitian women.

3. **Administration.**—In 1856 the island was severed from Tasmania, and created a distinct and separate settlement under the jurisdiction of New South Wales. In 1896 it was made a dependency under the Governor of that Colony, and was administered by the Chief Secretary's Department through a resident Chief Magistrate, in whom was vested the executive government of the settlement, and the supervision of its penal affairs. In 1913, however, a Bill was passed by the Federal Parliament providing for the taking over of the island as a territory of the Commonwealth. The Act came into force on the 1st July, 1914, and the island is now administered by the Department of Home and Territories, Melbourne, through an Administrator and Chief Magistrate. There is an Advisory Council, consisting of twelve members, presided over by the Administrator. Six of the members are elected by the residents, and six are nominated by the Administrator. The powers and duties of the Council were laid down in Ordinance No. 2 of 1925. According to this Ordinance the Executive Council has the oversight of public roads and reserves, etc. It may transmit to the Administrator for submission to the Minister proposals for new Ordinances or for the repeal or amendment of existing ones, and it may make by-laws in connexion with local matters.

4. **Population.**—The population on 31st December, 1925, was 367 males and 380 females, a total of 747. There were 188 householders on the island. In the year 1924–25, 16 births, 8 deaths, and 2 marriages were recorded.

5. **Live Stock.**—The latest returns of live stock show that there are on the island 1,954 cattle, 663 horses, 144 sheep, and 208 pigs. In addition, there are 5,846 head of poultry.

6. **Production, Trade, etc.**—The soil throughout is rich, and is specially suitable for the cultivation of citrus fruits, bananas, and (in parts) coffee. Various other sub-tropical fruits thrive well. During 1924–25, the production of oranges was 5,942 bushels; bananas, 271,600 dozen; passion fruit, 3,800 bushels; coffee, 18,320 lb.; and pineapples, 350 dozen. There are many thousands of lemon trees and guavas growing wild throughout the island.

Large numbers of whales pass the island throughout the season, but owing to old-fashioned methods very few are captured. With the employment of up-to-date appliances the whaling industry might be of great importance. The preserved fish industry also offers a field for commercial energy; such fish as trevalla, kingfish, snapper, and many others, are plentiful. The "all red" cable from Great Britain via Vancouver, Fanning Island, and Fiji, bifurcates at Norfolk Island, one line connecting with New Zealand, the other with Brisbane. A monthly steamship service between Norfolk Island and Sydney is carried on by Burns, Philp and Co.

Imports and exports for the last five years are given hereunder :—

IMPORTS AND EXPORTS, 1920–21 TO 1924–25.

Heading.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Imports..	22,673	14,312	15,461	22,023	17,190
Exports..	13,091	4,305	3,754	3,170	3,960
Total	35,764	18,617	19,215	25,193	21,151

7. Social Condition.—Education is free and compulsory up to the age of fifteen years. The school is under the New South Wales Department of Public Instruction, with standards corresponding to the State public schools, but the salaries and allowances of the teachers are paid by the Norfolk Island Administration. The number of scholars enrolled on the 30th June, 1925, was 130.

The Magistrates' Court has criminal jurisdiction in all crimes except capital offences, civil jurisdiction in all matters, and authority to grant probate and letters of administration.

8. Finances.—The receipts and expenditure for the year 1924–25 were as follows :—

NORFOLK ISLAND.—RECEIPTS AND EXPENDITURE, 1924–25.

Heading.	Receipts.	Heading.	Expenditure.
	£		£
Brought forward ..	3,793	Salaries	3,149
Commonwealth Subsidy ..	3,500	Repairs of Government Buildings	1,208
Tariff Collections in Sydney ..	772	Landing Places, Signals, etc...	94
Interest on Funded Stock ..	114	New Work (Mission Land) ..	78
Postal Department ..	117	Miscellaneous	854
Fees, etc.	541	Purchase of Liquor ..	672
Sale of Liquor	984	Balance carried forward ..	3,766
Total	9,821	Total	9,821

Traffic in intoxicating liquor is prohibited, and the item "Sale of liquor" in the table refers to liquor dispensed under medical prescription.

E. NEW GUINEA.

1. THE ISLAND OF NEW GUINEA.

1. Geographical Situation of New Guinea.—New Guinea, frequently described as the largest island in the world, lies to the north of Australia, between 0° 25′ and 10° 40′ S. latitude, and between 130° 50′ and 150° 35′ E. longitude. Its estimated area exceeds 300,000 square miles, the greatest length being 1,490 miles, and the greatest breadth 430 miles.

2. Discovery.—The island was probably sighted by Abreus in A.D. 1511. The first visit by Europeans was apparently either that by the Portuguese Don Jorge de Menesis on his way from Goa to Ternate in 1526, or that by the Spaniard Alvaro de Saavedra in 1528. In 1606 Torres, having parted company with De Quiros at the New Hebrides, sailed, on his way to the Philippines, through the strait which separates the island from Australia, and which now bears his name.

3. Colonization.—In 1793, New Guinea was annexed by two commanders in the East India Company's service. Since that date the Dutch have made extensive surveys of the western portion, and the British and Germans have occupied and colonized the eastern. In September, 1914, German New Guinea was seized and occupied by Great Britain by means of a force raised and despatched by the Australian Government.

4. Partition.—The three colonizing powers agreed to the partition of New Guinea, each having suzerainty over islands adjoining its own territory. The whole of the portion west of the 141st degree of latitude, comprising about 150,000 square miles, or nearly half the island, belongs to the Dutch. The eastern half was divided in almost equal portions between Great Britain and Germany, the area possessed by each (with adjacent islands), being about 90,000 square miles. An Anglo-German boundary commission appointed for the purpose of defining the boundary between the territories of the two nations, started operations on 26th December, 1908, and completed the field-work on

27th October, 1909. The total length of boundary delimited was 66¼ miles. The Dutch colony forms part of the residency of Ternate in the Moluccas, and has not been extensively developed. The German protectorate, where considerable commercial development had taken place, included the northern part of the eastern half of the mainland, known as Kaiser Wilhelm's Land, and the large islands of the Bismarck Archipelago and the Solomon Group, as well as nearly 200 smaller islands. The south-eastern portion of New Guinea, nearest Australia, is a dependency of the Commonwealth of Australia. The German Pacific protectorate was terminated in 1914.

2. PAPUA.

§ 1. General Description of Papua.

1. **Early Administration.**—Surveys of the east coast of New Guinea by Stanley, Yule, Blackwood, Moresby, and others, brought home to Queensland, and to Australia generally, the danger to her commerce which would result from foreign possession of the islands and coasts opposite to Cape York, and from the holding by a hostile power of the entrance to the splendid waterway inside the Barrier Reef. The mainland opposite the shores of Queensland east of the 141st meridian was therefore annexed by that colony in 1883, but the action was disallowed by the British Government. In 1884, however, a British protectorate was proclaimed by Commodore Erskine over the region lying east of the 141st meridian as far as East Cape, with the adjacent islands as far as Kosman island. In the year following, an agreement with Germany fixed the boundaries between the possessions of the two countries, and to Great Britain was assigned the portion now known as Papua, lying between the extreme limits of 5° and 12° S., and 141° and 155° E. The British protectorate was subsidized by Queensland, New South Wales, and Victoria, and lasted until 30th September, 1888, when it was proclaimed a possession of the Empire. Its constitution was then that of a Crown colony, in association, however, with Queensland. Administration was in the hands of a Lieutenant-Governor, aided by an Executive and a Legislative Council, and advised by a Native Regulation Board. Port Moresby, on the south coast, was made the head-quarters of the official establishment, and a supreme court was established there with magisterial courts in the districts, while an armed native constabulary force, under a European officer, was instituted for the maintenance of order. Native village constables as well as native interpreters, warders, boats' crews, etc., are also employed by the Crown.

2. **Administration by Commonwealth of Australia.**—The Territory was placed under the authority of the Commonwealth on 1st September, 1906, by proclamation issued in pursuance of Letters Patent of the 18th March, 1902, and was accepted by the Commonwealth by the Papua Act 1905, which came into force by virtue of the proclamation aforesaid. The transfer was made under the authority of section 122 of the Constitution (see p. 33 hereinbefore). The Territory is now under the administration of the Commonwealth, but not included within it, and is divided into eleven magisterial districts.

3. **Area, etc.**—Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude ; its southernmost portion, comprising Sudest and Rossel Islands, lies between 11° S. and 12° S. latitude. It is separated from Australia by Torres Strait. The length of Papua from east to west is upwards of 800 miles ; towards either end the breadth from north to south is about 200 miles, but about the centre it is considerably narrower. The Territory comprises also the islands of the Trobriand, Woodlark, D'Entrecasteaux and Louisiade groups. The length of coast-line is estimated at 3,664 miles—1,728 on the mainland, and 1,936 on the islands. The total area is about 90,540 square miles, of which 87,786 are on the mainland, and 2,754 on the islands. A reference to the physical characteristics of the Territory appears in previous issues of the Official Year Book (see No. 18, p. 633).

§ 2. Population.

The white population of Papua on 4th April, 1921, was 1,343, made up of 961 males and 382 females. Included in these figures were 79 persons, who were passengers and crew of the s.s. *Marsina*, which was at Samarai at the taking of the Census. The following table gives the white population in each of the last five years :—

WHITE POPULATION OF PAPUA, 1921 TO 1925.

Year ended 30th June.

1921.(*a*)	1922.	1923.	1924.	1925.
1,343	1,104	1,086	1,276	1,371

(*a*) The figure for 1921 is the Census return.

The chief occupations of the non-indigenous population at the taking of the Census were :—Government officials and employees, 132 ; commercial pursuits, 150 ; shipping, 124 ; tropical agriculture, 266 ; missionary work, 144 ; mining, 159.

It is not possible to give exact data regarding the number of natives, because a large area of the interior is not yet under Government control. The official estimate is 275,000. Some light was thrown on the question as to whether the natives are increasing or decreasing in numbers by a comparison of births and deaths recorded in the five years ending in 1924, the net result giving an increase of 1,376 persons, the figures lending support to the belief that there is a tendency towards a gradual increase. The coloured population, other than Papuans, numbered on 4th April, 1921, 577, and included many mission teachers from Samoa, Fiji, and other Pacific Islands. On the same date, half-castes, with one of the parents a European, totalled 158. An Immigration Restriction Ordinance prohibits the immigration of persons who fail to pass the dictation test, or who are of bad character, or likely to become a charge upon the public. Exemptions may, however, be granted by the Lieutenant-Governor to persons of special skill required for employment as overseers or foremen.

§ 3. Native Labour, Taxation, Health, etc.

1. **Native Labour.**—(i) *General.* The rights of both employer and labourer are conserved by the Native Labour Ordinances. Service on the part of the native is voluntary, and he must be justly treated, and properly housed and fed. Employers may recruit personally, or obtain their natives through a licensed recruiter. Contracts of service must be in writing entered into before a magistrate or other qualified officer, and the natives must be returned to their homes on completion of engagement. During the period of service the recruiter or employer is responsible for the native's welfare. Refusal to work after an engagement, or desertion from service, renders the labourer liable to imprisonment. On the other hand, a magistrate may terminate an engagement where unjust or harsh treatment by the employer is proved. The term of indenture must not exceed three years, and in the case of miners and carriers the limit is eighteen months, but re-engagements may be made. The magistrate must satisfy himself that the remuneration is fair, that the native is willing to undertake the service, and that there is no probability of unfair treatment or detention. Wages must be paid in the presence of an officer. A medicine-chest stocked with necessary drugs and first-aid

instruments must be kept by all employers. The table hereunder gives particulars regarding native labour during the last five years :—

PAPUA,—NATIVE LABOUR, 1921 TO 1925.

Year ended 30th June—	Natives Engaged.	Natives Paid Off.		
		Number.	Wages Paid.	Average Annual Wage per Native.
			£ s. d.	£ s. d.
1921	7,495	7,335	61,483 16 10	8 7 7
1922	4,590	6,251	57,474 0 8	9 3 10
1923	5,473	4,893	47.993 6 11	9 16 2
1924	6.206	4,959	42,776 7 8	8 12 6
1925	6,817	4,661	46,019 14 5	9 17 5

In addition, 1,295 natives were employed in the Territory in 1925 who were not under a contract of service.

Up to the present it is stated that the supply of native labour has been sufficient to meet the demand.

Natives in charge of vessels owned by Europeans, drivers of launches and motor orries, carpenters and other skilled labourers receive from £3 to £10 per month.

2. **Native Taxes.**—Under the Native Taxes Ordinance, passed in 1918, a tax not exceeding £1 may be imposed on natives, excepting native constables, mission teachers, natives unfit for work, and those who have not less than four living children. The proceeds of the tax must be expended on education, or devoted to purposes directly benefiting the natives, as may be prescribed.

The taxes collected in 1924–25 amounted to £14,453 net, of which £8,672 was transferred to the Native Education Fund, and £5,781 to the Native Benefit Fund. The Native Education Fund during the year 1924–25 disbursed to primary education £3.282, technical training £2,124, and to agricultural education £1,857, leaving a credit balance of £31,450. From the Benefit Fund the expenditure was as follows :—Promotion of native plantations £1,788, anthropology £1,173, health £3,693, village improvements £64, family bonuses £1,084—leaving a credit balance of £2,435.

3. **Care of Half-caste Children.**—An Ordinance was passed on the 11th September, 1922, to provide for the care and maintenance of neglected half-caste children. The Ordinance provides that a sum of £26 per annum shall be paid to the Commissioner for Native Affairs by the adjudged father of the child until the child, if a boy, shall reach the age of 16 years, or, if a girl, 18 years.

4. **Health.**—During the year natives to the number of 1,800 were admitted to the native hospitals in Port Moresby and Samarai. The chief complaints treated were yaws, ulcers, lung affections, and malaria. Three travelling medical officers and two European medical assistants were employed, and native medical assistants are being trained by them. The work done by the travelling officers consisted chiefly of dealing with cases of yaws by means of the latest arsenical drugs, the distribution of hookworm treatment, and the control of venereal diseases. In all 5,918 cases of yaws and 16,021 cases of hookworm were treated by the travelling staff. Out of an average of 7,000 native labourers employed by Europeans, 138 died, as compared with 126 during the previous year.

§ 4. Land Tenure.

1. Method of Obtaining Land.—(i) *The Land Laws.* The broad principles upon which the land laws of Papua are based are :—(*a*) No land can be alienated in fee simple ; (*b*) the rental of the land leased is assessed on the unimproved value and is subject to reassessment at fixed periods.

A detailed account of the method of obtaining land was given in Official Year Book No. 6, pp. 1083–4.

(ii) *The Leasehold System.* With a view of attracting pioneer settlers, an ordinance was passed in 1906 under which leases were granted on very liberal terms. No rent was payable for the first ten years, the heavy expense of survey was borne by the Government, and no charge was made for the preparation and registration of the leases. Under this system, the area under lease increased in four years from 2,089 acres to 363,425 acres ; about 140 plantations were started, and nearly 1,000 acres planted during that period.

After allowing free survey for three years, it was decided that all future applicants for agricultural leases exceeding in area 100 acres should be required to pay the cost of survey. It was also found desirable to check a tendency amongst a proportion of land applicants to obtain areas so great that the improvement conditions could not be carried out. It was therefore enacted that no leases should be granted after 1st June, 1910, exceeding 5,000 acres in extent, and that rent at the rate of 3d. per acre must be paid from the commencement of all leases exceeding 1,000 acres in area.

2. Holdings.—(i) *General.* On the 30th June, 1925, the lands of the Territory were held as follows :—

PAPUA.—HOLDINGS, 1925.

Description.	Area.
	Acres.
Land held by the natives	56,929,419
Crown land	804,748
Freehold land	23,085
Leasehold land	188,348
Area of Territory ..	57,945,600

Private sales of land in the Territory have now practically ceased. The Government buys from the natives, and then leases to planters, who are forbidden to have direct dealings in land with Papuans.

(ii) *Leaseholds.* The position as regards leasehold tenures may be seen from the following table :—

PAPUA.—LEASEHOLDS, 1920–21 TO 1924–25.

Year ended 30th June ..	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Land held under lease .. acres (as recorded)	229,283	219,181	193,494	190,124	188,348

Of the total area of 188,348 acres shown above, agricultural leases accounted for 180,728, pastoral leases for 5,687, special leases for 890, mission leases for 799, and other leases for 244 acres.

The area of land acquired by the Crown in 1924–25 was 2,259 acres.

The total area surveyed in the Territory is 21,666 acres of freehold, and 254,795 acres of leasehold.

§ 5. Production.

1. **General.**—The products of the Territory are obtained from its agricultural, forestal, fishing, mining, and manufacturing industries. For many years gold-mining yielded the largest returns, but the production has dwindled considerably owing to the exhaustion of the alluvial deposits. Satisfactory results are, however obtained from copper-mining on the Astrolabe field. There is also the possibility of obtaining petroleum in marketable quantities. Amongst plantation products, copra occupies the foremost place, but little planting has been done in recent years. Portions of the Territory appear well suited for cotton cultivation.

2. **Agriculture.**—(i) *Soil and Rainfall.* The physical features of Papua are favourable to agriculture. Rich soils at varying elevations, and heavy and evenly-distributed rainfall favour the cultivation of a variety of tropical products including sugar cane, coconuts, sago palm, bread fruit, dyewoods, spices, ginger, nutmegs, bananas, and other fruits. There are large areas of rich alluvial and volcanic soils along the coast, and fertile land is found at elevations up to 6,000 feet. Heavy rainfalls occur, except over a belt of country which runs back from the coast to the hills, and which has its dry season from May to November. This "dry" area is admirably suited for the production of tobacco, fibres, cotton, etc. There are 21 meteorological stations throughout the Territory, and an economic museum and agricultural library have been established.

(ii) *Plantations.* On 31st December, 1924, there were 277 plantations. Agricultural settlement has been mostly in the Central and Eastern Divisions, and the area planted was 61,180 acres, as against 60,863 in 1923. The principal plantation crops are coconuts, rubber, and sisal hemp. There is also some cultivation of bowstring hemp, kapok, coffee, tobacco, vanilla, cocoa, tapioca, cinnamon, tea, rice, and maize. The natives are compelled by an ordinance to plant coconuts for food supply. In addition to the coconuts in these plantations, many more are planted over small and widely scattered areas by the older natives in accordance with custom. The following table shows the areas under the different cultures at the end of December, 1924 :—

PAPUA.—AREA OF PLANTATIONS, 1924.

Description.	Area.
	Acres.
Coconuts	48,022
Rubber	7,846
Hemp	3,878
Coffee	21
Rice	14
Cotton	955
Other cultures (including fruit trees)	444
Total	61,180

The yields of copra and rubber for the year ended 30th June, 1925, were :—Copra, 7,765 tons ; rubber, 511 tons. There has been a slight increase in the acreage under coconuts and rubber, and a decline in the acreage under hemp. The prospects for cotton-growing are favourably regarded, and in May, 1925, over 1,500 acres were under cultivation.

(iii) *Government Plantations.* There are five Government plantations. The net capital expenditure on these to the 30th June, 1924, was £40,100. For 1924–25, the aggregate net profit over working expenses and capital expenditure is estimated at about £5,700.

3. **Forestry.**—According to the Commonwealth Forestry Adviser the principal softwood timber is known as "ilimo," while among satisfactory timbers of the lowlands are "nara," "medobi," and "melila." There is a large number of woods, varying from the softest to the hardest, including beautiful cabinet woods, but research is necessary to determine their usefulness. The development of a coniferous belt at the higher altitudes offers great possibilities. It is believed that teak and sandalwood are well suited for cultivation.

4. **Live Stock.**—On 31st December, 1924, the live stock in the Territory consisted of 621 horses, 5,372 head of cattle, 154 mules, 5 donkeys, 2,769 goats, and 633 pigs. A Government stud-farm has been established for the breeding of horses. The introduction of rabbits, foxes, hares, and monkeys is prohibited.

5. **Fisheries.**—Pearl-shell fishing occupies an important place in the industries of Papua. A considerable number of luggers is licensed, but the returns are mostly credited to Queensland, whose boundary approaches to within a few miles of the Papuan coast. The species of tortoise which supplies the commercial tortoise-shell is also a native of the Territory. Bêche-de-mer and trochus are found along the shores and reefs, and form valuable articles of export.

6. **Mining.**—(i) *Variety of Minerals.* Minerals have been found over a wide range of country. Those discovered so far are—gold, copper, tin, lead, zinc, cinnabar, iron, osmiridium, gypsum, manganese, sulphur, graphite, chromite, brown coal, lignite, and petroleum. The existence of petroleum has been traced at scattered intervals over a large area between Yule Island and the Purari Delta, in the Gulf Division of Papua. Fourteen licences have been granted to search for oil and coal, covering an area of 12,652 square miles. During the year 1924–25 four companies were operating, viz., the Anglo-Persian Oil Co. Ltd. (as agents for the Commonwealth Government), the New Guinea Oil Co. Ltd., the Nabo Oil Development Co., and the Papuan Oil Exploration Co. Ltd. Up to the present there has been no production of oil on a marketable scale.

Of precious stones, only the topaz and beryl have been obtained. Large beds of apparently good coal also exist.

(ii) *Gold.* In 1888 the first gold was discovered, and the search gradually spread over every division, finds being reported wherever the explorers went. The yield in 1923–24 was the lowest recorded since 1895, but it improved considerably during 1924–25. The first dredging and sluicing plant in Papua commenced operations on the Gira River in January, 1924.

The total quantity, in fine ounces, and the value as returned of the gold yield for the last five years are given below :—

PAPUA.—GOLD YIELD, 1920–21 TO 1924–25.

1920–21.		1921–22.		1922–23.		1923–24.		1924–25.	
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
fine ozs.	£	fine ozs.	£	fine ozs.	£	fine ozs.	£	fine ozs.	£
2,047	11,159	14,645	68,726	17,033	22,494	2,166	6,702	4,947	17,642

Most of the rivers, with the exception of those flowing into the Gulf of Papua, have been declared open to gold-dredging, and good yields have been obtained. The total value of gold won to 30th June, 1925, was £1,680,078.

(iii) *Copper.* The New Guinea Copper Mines Ltd., on the Astrolabe field, after overcoming many initial difficulties have now entered upon the producing stage, and it is anticipated that a steady output will be maintained from the mines controlled by the Company. During the year 1924–25 the shipments to Australia amounted to 2,000 tons of 22.5 per cent. copper matte, and 88½ tons of 98.8 per cent. blister copper of a gross total value of £41,674. The total value of the copper exported to the 30th June, 1925, was £204,000.

(iv) *Osmiridium.* The existence of osmiridium had been known for some years, but for some time no serious attempt was made to collect it, the alluvial gold miner often picking out the larger slugs of the metal from his gold parcel and throwing them away. The production in 1924–25 amounted to 116 ozs., valued at £3,630, obtained on the Gira gold-field.

(v) *Other Minerals.* Some good samples of galena (sulphide of lead) have been obtained, while cinnabar (sulphide of mercury), graphite (or plumbago), zinc-blende, native sulphur, and other minerals are known to exist. In 1924 a deposit of lignite was discovered on Smoky Creek, a tributary of the Era River.

A mineral laboratory and museum have been fitted up, and are available to prospectors and others interested.

7. **Water Power.**—Most of the rivers in Papua carry a large volume of water from a great height over a relatively short distance, thereby offering opportunities for the installation of hydro-electric power plants. It is estimated that there are at least 10,000,000 h.p. available for this purpose.

§ 6. Finance, Trade, Postal and Shipping.

1. **Finance.**—The revenue for 1924–25 exceeded that of the previous year by £7,481, the chief increase being in Customs and Excise. The principal sources of revenue were as follows :—Commonwealth Grant, £50,000 ; Customs and Excise, £54,160 ; Fees of Office, £6,646 ; Land Revenue, £3,683 ; Post Office, £2,731 ; Port and Wharfage Dues, £2,192 ; Miscellaneous, £11,075.

The expenditure was £12,191 more than that of the previous year. There was an increase of nearly £5,000 in the Department of the Treasury, and over £7,000 in that of Public Works. The expenditure by the Medical Department increased by about £1,000.

Returns of revenue and expenditure for the last five years, exclusive of Commonwealth grants, are given hereunder :—

PAPUA.—LOCAL REVENUE AND EXPENDITURE, 1920–21 TO 1924–25.

Item.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Revenue	82,316	68,138	63,124	77,750	82,909
Expenditure	146,827	124,912	123,691	131,640	143,830

2. **Trade.**—The value of imports and exports for the last five years is shown in the table below :—

PAPUA.—VALUE OF IMPORTS AND EXPORTS, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Imports..	484,770	305,705	315,423	354,965	459,080
Exports..	172,672	220,236	179,452	239,408	367,629
Total Trade ..	657,442	525,941	494,875	594,373	826,709

As in all new countries, the imports consist chiefly of articles necessary for the primal needs of the community, such as agricultural products and groceries, drapery, machinery, tobacco, oils, paints, beverages, wood, wicker, and cane, drugs, etc. The chief items of export during the last five years are as follows :—

PAPUA.—PRINCIPAL EXPORTS, 1920–21 TO 1924–25.

Article.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Osmiridium	6,245	959	2,790	3,553	3,630
Gold	11,159	68,726	22,494	6,702	14,980
Copra	68,578	87,377	112,481	136,659	172,905
Rubber	28,966	5,826	5,907	33,334	68,507
Hemp	7,723	4,630	..	1,125	13,141
Copper Ore	1,830	13,514	14	120	41,674
Pearl Shell and Trochus Shell	4,464	4,043	1,868	6,120	8,773
Pearls	14,950	5,250	9,797	16,600	19,300
Bêche de-Mer	7,922	15,045	13,453	10,441	10,351
Bark	1,408	752	..	..	..
Cotton	..	..	..	550	3,761

3. **Shipping.**—The following table shows the number, tonnage, and nationality of oversea vessels entered and cleared at ports during the years 1920–21 to 1924–25. The whole of the tonnage was British.

PAPUA.—OVERSEA SHIPPING, 1920–21 TO 1924–25.

Year.	Vessels.	Tonnage.
1920–21	108	67,624
1921–22	127	74,206
1922–23	143	77,676
1923–24	99	68,170
1924–25	120	78,613

Throughout, the figures are exclusive of ships of war and Government vessels.

§ 7. Progress of Papua.

1. **Statistical Summary.**—As already stated (§ 2, *supra*) the Territory was placed under the Commonwealth control on 1st September, 1906. The following table indicates the progress that has been made since that date :—

PAPUA.—STATISTICAL SUMMARY, 1907 TO 1925.

Items.	Year ended 30th June—	
	1907.	1925.
White population	690	1,371
Native labourers employed	2,000	6,879
Number of white civil servants	65	135
Armed constabulary	185	260
Village constables	401	994
Territorial revenue	£21,813	£82,909
Territorial expenditure	£45,335	£143,830
Value of imports	£87,776	£459,080
Value of exports	£63,756	£367,629
Area under lease .. acres	70,512	188,348
Area of plantations .. acres	1,467	61,180
Meteorological stations established	3	21
Gold yield .. fine ounces	12,439	4,947
Live stock in Territory—		
Horses	173	621
Cattle	648	5,372
Mules	40	154

3. THE TERRITORY OF NEW GUINEA.

§ 1. General Description.*

1. **Area and Geographical Position.**—The present Territory of New Guinea comprises that portion of the German New Guinea Protectorate which lay south of the equator (excepting only the island of Nauru, see F hereinafter), and which was known in German times as the "Old Protectorate." The principal islands (with their German names if these differ from those now in use) and their approximate areas are as follows :—

AREA OF TERRITORY OF NEW GUINEA.†

Particulars.	Approximate Area.
	Square miles.
North-East New Guinea (Kaiser Wilhelm's Land)	70,000
Bismarck Archipelago—	
New Britain (Neu Pommern)	13,000
New Ireland (Neu Mecklenburg)	3,000
Lavongai (New Hanover or Neu Hannover)	600
Admiralty Islands and North-Western Islands	1,000
Solomon Islands—	
Bougainville	3,200
Buka	200
Total	91,000

2. **North-East New Guinea.**—(i) *General.* North-East New Guinea (Kaiser Wilhelm's Land) is the north-eastern part of the island of New Guinea. Much of the interior, which is rugged and mountainous, with heights reaching to over 13,000 feet, is still unexplored. The mountain ranges approach the coast, leaving comparatively little flat land near sea level, but this narrow strip is very fertile. All trade and communications are by sea along the coast, and the interior is left almost wholly to the native population.

(ii) *Coast-line.* The coast-line, which is over 900 miles long, is in parts fringed with coral reefs, and there are many small, lofty islands along its course. Except for Huon Gulf in the little developed east of the country, there are no deep inlets. Langemak Bay has commodious anchorage in deep water, and Finsch Harbour has landlocked anchorage for small vessels. Astrolabe Bay has two or three sheltered harbours, including Melanua, Madang (Friedrich Wilhelm Harbour) and Sek, which are the best on the coast. There are many other anchorages suitable, in certain winds, for schooners and small steamers.

(iii) *Rivers.* There are many rivers, of which the most important are the Sepik (Kaiserin Augusta) and the Ramu (Ottilien). The Sepik rises near the junction of the boundaries of Dutch New Guinea and Papua, and flowing easterly reaches the coast in latitude 4° S. It is navigable for 60 nautical miles by large ocean steamers, and for 300 nautical miles by steamers drawing from 10 to 13 feet. In 1914, a vessel of 50 tons ascended the river for 450 miles ; it was then in flood and 7 fathoms deep at this distance, while at low water the depth was said to be 4 fathoms.

The Ramu rises in about 6° S. latitude and, flowing northwards, enters the sea near the mouth of the Sepik. It has been navigated, though with great difficulty, by flat-bottomed steamers for nearly 200 miles from its mouth.

3. **Bismarck Archipelago and Solomon Islands.**—(i) *General.* The islands of the Bismarck Archipelago and the Solomons are generally mountainous, with level ground near the coasts alone. The only low-lying islands are some in the Duke of York and Admiralty Group. The islands of Bougainville and Buka (Solomons) are equally rugged ;

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* A map of the Territory was published in Official Year Book No. 16, p. 665.
† In regard to geographical position, see Year Book No. 16, p. 660.

Bougainville contains mountains reaching 10,000 feet. The soil is usually fertile, except on the low coral islands, where fresh water is scarce.

(ii) *Coast Line.* The coasts of the large islands often rise steeply from the water, with bold headlands; but as a rule there is a beach, frequently overgrown with mangroves. Sunken rocks and coral reefs fringe many of the coasts, especially of the low islands. There are many good harbours, the chief being Blanche Bay, in New Britain, containing the good anchorages of Matupi Harbour and Simpson Harbour; Kavieng Harbour in New Ireland; Mioko in the Duke of York Islands; Peter Harbour in the Vitu Islands; Nares Harbour in Manus Island; and Queen Carola Harbour in Buka Island.

(iii) *Rivers.* Most of the streams in these islands are too shallow and too rapid for navigation..

§ 2. Climate and Health.

1. **General.**—The Territory has a moist tropical climate, with small differences between daily and seasonal extremes of temperature. There is no cool season, rain falls in all months, and the humidity is high. The Territory is outside the area of typhoons, but strong winds are not uncommon, and damage is occasionally done to plantations.

2. **Temperature.**—The mean annual temperature on the coast is about 26° to 27.5° C. (79° to 81° F.)—a moderate temperature for the latitude—and the difference between the means of the coldest and warmest months is not more than 2° F.

3. **Rainfall.**—There is no really dry season. At Rabaul the period of the north-west monsoon, November to April, is wetter than that of the south-east trade from May to September or October; but in some other places, especially the south coast of New Britain and in the vicinity of Finsch Harbour, the south-east trade brings the principal rains. The position of the coast with regard to the direction of the prevailing winds is the decisive factor in the rainfall. The annual rainfall amounts, at nearly all the stations at which observations have been made, to over 80 inches. Additional information under this heading is given in Official Year Book No. 18, page 642.

4. **Humidity.**—The humidity is very high. Observations taken at Rabaul during the years 1916 to 1921 showed an average humidity of 75 per cent., and the variation in the monthly means was only from 69 per cent. (October) to 80 per cent. (April). At Madang, during the same period, the yearly average was 80 per cent., the lowest monthly mean 77 per cent. (August), the highest 83 per cent. (April). During the same period at Kieta (Bougainville) the mean was 78 per cent., the minimum 74 per cent. (August and October), and the maximum 80 per cent. (June).

5. **Influence on Health.**—The climate in North-East New Guinea and at many places in the Bismarck Archipelago and the Solomon Islands is enervating for Europeans. At some places, however, and notably at Rabaul, the heat and humidity are tempered by the constant breezes, and it is possible for Europeans, with careful attention to diet and exercise, and precautions against diseases, to maintain good health. When the measures taken against malaria and other diseases have produced their full effect, and use has been made of places in the mountains suitable for sanatoria, it is hoped that a satisfactory average of health will be maintained.

§ 3. Government.

1. **The Military Occupation.**—On the 17th September, 1914, the Acting Governor of German New Guinea signed terms of capitulation with the officer commanding a Naval and Military Expedition sent from Australia, and thereafter the Territory was under military administration until the establishment of Civil Government in May, 1921.

2. Mandate.—In 1919 it was decided by the principal Allied and Associated Powers that the Territory of New Guinea, which Germany surrendered in accordance with the terms of peace, should be entrusted under Mandate from the League of Nations to the Government of the Commonwealth of Australia. The issuing of the Mandate was, however, delayed; and it was not until 17th December, 1920, that its terms were settled, and the Mandate itself did not reach Australia until April, 1921.

The terms of the Mandate are given in Official Year Book No. 16, p. 662–3.

3. New Guinea Act.—In anticipation of the issuing of the Mandate, the Commonwealth Parliament had already, in September, 1920, passed the New Guinea Act 1920, by which the Governor-General was authorized to accept the Mandate when issued. The Territory was, by the Act, declared to be a Territory under the authority of the Commonwealth, by the name of the Territory of New Guinea.

The Act provided for an Administrator, while power to legislate for the Territory was to be exercised by the Governor-General.

Provision was also made for the observance of safeguards in the interests of the natives as set out in the Mandate.

4. Establishment of Civil Government.—On receipt of the Mandate, arrangements were made by the Prime Minister, under the whose control administration of the Territory was placed,* for the establishment of Civil Government, and on the 9th May, 1912, a proclamation was issued in Rabaul that the military occupation had that day terminated. On the same day the first Ordinances made by the Governor-General under the New Guinea Act 1920 came into force. The most important of these was the *Laws Repeal and Adopting Ordinance* 1921, which provided that German laws should cease to apply to the Territory, and substituted other statute laws, together with the principles and rules of common law and equity in force in England, as the basis of the law of the Territory, subject to modification by Ordinance made by the Governor-General.

The Ordinance also preserved the rights of natives in land, and their rights, privileges and customs in regard to cultivation, barter, hunting, and fishing; and it provided that tribal institutions, customs, and usages should continue, so far as they were not repugnant to the general principles of humanity.

Other Ordinances which came into force on the same day provided for the establishment of courts of law, and for the prohibition of the supply to natives of firearms, ammunition, intoxicating liquor, and opium.

The "Advisory Council Ordinance," 1926, provides for an Advisory Council, consisting of the Government Secretary, the Treasurer, the Commissioner of Native Affairs, the Director of Public Health, and the Director of Agriculture.

5. Expropriation.—The Treaty of Peace provided that German nationals resident in her former colonies might be repatriated; and that the property rights and interests of German nationals in former colonies might be retained and liquidated by the Allies, the proceeds being credited to Germany in part payment of the reparation payable by her under the Treaty. In pursuance of these powers, in September, 1920, the property of the principal German companies in the Territory, and in March, 1921, that of a large number of German planters, was vested in the Public Trustee; and the management of their businesses and plantations was entrusted (pending the sale or other disposal of the properties) to the Expropriation Board. (See Year Book No. 17, p. 631.) In 1926 a number of these plantations was transferred to private owners.

6. Departments and Districts.—The Administration is organized in eight Departments—Government Secretary; Treasury; Native Affairs; Public Health; Public Works; Customs and Shipping; Lands, Mines, Surveys, and Forestry; and Agriculture.

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* Control of the administration was transferred in July, 1923, to the Department of Home and Territories.

For administrative purposes, the Territory is divided into eleven Districts, named after the principal stations in them, as follows :—In New Britain—Rabaul, Talasea, and Gasmata ; on the Mainland—Morobe, Madang, Aitape, and Sepik ; in New Ireland and Lavongai (New Hanover)—Kavieng and Namatanai ; in Admiralty Islands and adjoining islands—Manus ; in Solomon Islands—Kieta. Each District is under a District Officer, assisted by a small staff.

7. Statute Law.—The Acts of the Commonwealth Parliament do not (unless expressly so stated) extend to the Territory, but the *Laws Repeal and Adopting Ordinance* 1921 provided that certain Acts and Ordinances should be applied thereto. (See Year Book, No. 17, p. 631.)

8. Reports to the League of Nations.—Five Reports have been rendered to the League of Nations in compliance with Article 6 of the Mandate, the latest being for the year ended 30th June, 1925.

§ 4. Population.

1. White Population.—The increase in the white population at various intervals since 1885 is shown in the appended tabulation. On 4th April, 1921, it was 1,288, of whom about 250 were missionaries, and 262 were persons engaged in administration ; 715 were British subjects, and nearly all the remainder were nationals of former enemy countries. On 30th June, 1925, the number of Europeans was about 1,450.

TERRITORY OF NEW GUINEA.—WHITE POPULATION, 1885 TO 1925.

Year.	Number.
1885	64
1895	203
1910	687
1914	1,027
1921	1,288
1925	1,450

2. Asiatic Population.—Malays seem to have been the first Asiatics brought by the Germans to German New Guinea ; 37 of them are recorded on the mainland in 1885. About 1889 the New Guinea Company began to bring Chinese, Malays, and Javanese in growing numbers from Singapore and Java to work on its plantations ; by 1892 there were about 1,800 on the mainland. By 1898 the number had decreased to 300 or 400, while at present it is less than 250.

About ten years later, Chinese were brought from China to the Protectorate ; in 1911 there were 555, in 1914, 1,377, in 1921, 1,424, and in June, 1925, about 1,300.

In 1895 there were 2 Japanese in the Protectorate, in 1911 there were 25, in 1914. 103, in 1921, 87, and in June, 1925, about 54 residents. The total Asiatic population was 1,681 in 1914, and 1,778 in 1921. There were also, in 1921, 28 Polynesians and 69 half-castes.

The number of Asiatics has slightly decreased. In 1924–25 the births of Chinese exceeded the deaths by 43, but departures exceeded arrivals by 70, so that the population decreased by 27. The number of Japanese decreased by 5.

The Chinese provide the skilled artisans of the Territory, and many of them are small traders. Most of the Japanese residents are employed in the plantations, shipyards, and stores.

3. **Native Population.**—As a large portion of the Territory is not under Government influence it is not possible to obtain reliable figures in regard to the number of the natives.

The following table shows the number enumerated in 1924, in each of the administrative districts.

TERRITORY OF NEW GUINEA.—NATIVE POPULATION, 1924 (EXCLUSIVE OF INDENTURED LABOURERS).

District.	Children.			Adults.			Total.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
Aitape ..	6,780	5,535	12,315	11,073	9,834	20,907	17,853	15,369	33,222
Gasmata ..	1,725	1,772	3,497	3,330	2,717	6,047	5,055	4,489	9,544
Kavieng ..	3,126	2,988	6,114	8,036	7,524	15,560	11,162	10,512	21,674
Kieta	6,031	4,802	10,833	11,413	11,918	23,331	17,444	16,720	34,164
Madang ..	5,776	4,939	10,715	10,434	8,635	19,069	16,210	13,574	29,784
Manus ..	2,007	2,378	4,385	4,609	4,489	9,098	6,616	6,867	13,483
Morobe ..	10,052	8,520	18,572	13,555	13,086	26,641	23,607	21,606	45,213
Namatanai ..	2,147	2,484	4,631	5,781	5,176	10,957	7,928	7,660	15,588
Rabaul ..	6,644	6,355	12,999	12,462	9,848	22,310	19,106	16,203	35,309
Sepik	592	543	1,135	997	851	1,848	1,589	1,394	2,983
Talasea ..	2,831	3,133	5,964	5,243	5,380	10,623	8,074	8,513	16,587
Total ..	47,711	43,449	91,160	86,933	79,458	166,391	134,644	122,907	257,551

The total native population in the Territory is estimated roughly at between 325,000 and 350,000. Whether the number is increasing or decreasing cannot yet be ascertained with certainty; but apparently it is decreasing in New Ireland and Bougainville, and increasing in New Britain, while in the Admiralty Group it appears to be stationary.

§ 5. The Natives.

1. **General.**—A brief description of the native inhabitants of the Territory was included in Year Book No. 16, page 670. It may be noted here that the natives are divided into two main groups—Melanesian and Papuan—the former, with odd exceptions constituting the population of the Bismarck Archipelago, the Solomon Islands, and the coastal districts of the New Guinea mainland; while the latter inhabit the interior of the mainland. Odd tribes of Negritoes are known to exist in the mountains of New Guinea. In the Admiralty Islanders there is a strain of Papuan, and, possibly, of Polynesian blood, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians.

2. **Land Tenure.**—Native customs in regard to the ownership and use of land may be briefly outlined as follows:—The ownership and use of the land are generally individual, although, in some rare cases, particularly in North Bougainville, the communal system exists. In districts where a great many coconut-bearing palms are growing on native lands it is often found that the land is the property of a chief or of one of the old men of the tribe, and that the coconut palms growing thereon are divided into small groves, and are the property of several members of the tribe. Customs with regard to the use of unoccupied forest lands differ. Right of inheritance to land is almost invariably through the maternal branch. (See Year Book No. 17, p. 634.)

3. **Research Work.**—During the German occupation of the Territory a certain amount of research work was carried out, partly by scientific expeditions, and partly by missionaries and by a local resident, and an anthropologist has been appointed by the Commonwealth Government to consolidate the work already done, and to extend it to parts of the Territory which have not yet been covered. The results of his work will appear in special reports, commencing with the year 1926.

4. Education.—The education of the natives was provided for in the "Education Ordinance of 1922," under which the Administrator was authorized to establish schools, grant money therefor, prescribe instruction, and arrange for the training of teachers and other matters. Simultaneously a Native Education Trust Fund was inaugurated, over which the Administrator was given control, and for the benefit of which he was empowered, within certain limits, to levy taxes on the natives and on employers of native labour. The expenditure on native education in 1924–25 was £10,150. This included £1,957 spent in the erection of new buildings. No education tax has been levied during the last two years.

A Government educational establishment has been founded at Malaguna, near Rabaul, and it is proposed to make it the educational centre for the natives in the Mandated Territory. The buildings which have been erected and are gradually being extended include staff-quarters, class-rooms, work-shops, dormitories, etc. The teaching staff in 1925 consisted of a head-teacher, two assistant teachers, and a female teacher. The educational system embraces kindergarten work, elementary education, and technical training. At the end of 1925 there were 120 native children receiving elementary education, and 39 were undergoing technical training, the pupils being representative of every district in the Territory. English has been made the school language. (See Year Book No. 17, p. 635.)

A considerable amount of educational work is carried out by the missions, the schools maintained being of three classes—(*a*) elementary schools in villages; (*b*) intermediate boarding-schools at head-quarters; and (*c*) high schools. The village schools are under native teachers; the most promising pupils pass to the intermediate schools, where they are taught by European teachers assisted by native tutors. At the high schools, teachers are trained for the village schools and tutors for the intermediate schools. Technical training is provided in the vicinity of Rabaul and in parts of the New Guinea mainland, the natives being trained in printing, bookbinding, tanning, bootmaking, carpentry and cabinet work, and the making of ropes, bricks, baskets and mats. At the end of June, 1925, the various missions maintained 1,013 schools, employing 161 European teachers and 946 native teachers. The pupils numbered 28,930.

The granting of assistance to the schools is authorized by the Education Ordinance, but no grants have hitherto been made.

5. Health of Natives.—In a report dealing with the health of the natives in New Britain submitted before the war, it was stated that "the natives in the districts examined are not degenerate; but they are sick." The same qualification undoubtedly applies to the native population throughout the Territory.

The diseases taking the greatest toll of native life—directly, or through lowering vitality—are:—Malaria, respiratory diseases, dysentery, frambœsia, yaws, tropical ulcer, hookworm, filariasis, and beriberi. Further reference to this subject will be found in Official Year Book No. 18, p. 647.

The Health Department in Rabaul possesses:—(i) a staff of medical officers and orderlies, including travelling doctors; (ii) Native Hospitals at Government stations and sub-stations (its staff also supervises hospitals on plantations); (iii) a laboratory in Rabaul under an expert bacteriologist; (iv) training system for natives as medical tul-tuls; (v) scheme of distribution of medical necessaries; (vi) a leper-station near Madang; and (vii) undertakes the general oversight of sanitary conditions.

The campaign during the year 1924-25 was principally devoted to the combating of gonorrhœa, and over 1,000 natives were treated for the disease.

6. Missions.—There are a number of mission societies working in the Territory. The Society of the Sacred Heart of Jesus works in the Bismarck Archipelago, the Society of the Holy Ghost along the coast of North-East New Guinea from Sek to the Dutch border, the Marists in Buka and Bougainville. These are Roman Catholic Missions. The Protestant Missions are the Australian Methodist Mission in New Britain and New Ireland, the New Zealand Methodist Mission in Bougainville, the Liebenzell Mission in the Admiralty Group, and the Lutheran Mission (supported and staffed by the Lutheran Churches in Australia and America), which work along the coast of North-East New Guinea from Sek to the Papuan border. All these societies combine teaching and planting with their missionary work. The missionaries working in the Mandated Territory number 351, including American, 21; Austrian, 6; Belgian, 1; British, 50; Dutch, 27; French, 24; German, 208; Italian, 2; Luxemburgese, 5; Polish, 6; Free City of Danzig, 1. Some of the societies have small printing plants by which reading matter in one or other of the native languages is produced.

§ 6. Land Policy.

1. **Acquisition of Land.**—Land, in pre-German days, was bought from the natives for a little "trade goods." After the annexation by Germany, land laws and regulations were introduced which, in the course of years, were added to and made more stringent, eventually developing into the "Land Regulations of 1st January, 1914." The policy of the German Government showed a preference for freehold tenure. A thirty year's lease system was, however, introduced for Chinese planters, who could not own land. The access to land by Europeans, irrespective of nationality, was easy, and no limit was fixed to the areas they could own. Where ownership in the land was claimed by the natives, the purchaser had to satisfy them with the usual gifts, after which he had to pay the Government not more than 8s. an acre and not less than 5 pence, and bind himself to make certain improvements. Under these easy terms large areas were acquired by various companies, mission societies, and private persons. The total area held by Europeans (mainly Germans), when war broke out, measured upwards to 700,000 acres, of which about 145,000 acres had been planted.

During British military occupation the sale of land was suspended, while leases of land were issued only for twelve months at a time.

2. **Land Policy of the Present Administration.**—The Land Ordinance 1922–24 provides for sale as well as leasing of land belonging to the Crown. The divergence from the policy usually adopted by the British in the Pacific (including Papua), which provides for leasehold only, was made with a view to disposing by sale of the freehold properties taken over from Germans, and which are now controlled by the Expropriation Board. Reference to the leasehold system in force will be found in Official Year Book 18, page 648.

During the year 1924–25 leases covering a total area of about 8,404 acres were granted.

3. **Registration of Titles.**—Under German law there was a system of registration of titles in a "Ground Book," but registration did not confer an indefeasible title. The German system has been replaced by one modelled on the Torrens plan, embodied in an Ordinance entitled the "Lands Registration Ordinance," 1924.

§ 7. Production.

1. **General.**—The Territory possesses great natural resources, but their development has barely commenced, and progress in this direction will depend largely on the possibility of securing an adequate supply of suitable labour.

2. **Agriculture.**—(i) *General.* No estimate has yet been made of the area of land suitable for agriculture; but it is certain that the area already alienated, if planted to its full capacity, would be far greater than the present native population could cultivate.

The natives have been described as a people of peasant proprietors, and everywhere they practise a crude form of agriculture. Their gardens afforded but a small amount of produce for oversea trade, and the exports of the Protectorate grew only as European plantations were made. The average of the latter increased slowly, for the Protectorate is almost everywhere covered with forest, and the clearing and planting of the land, even if labour can be had, necessarily occupy considerable time.

Under the supervision of the Director of Agriculture, soil analyses have been undertaken in different parts of the Territory, and experimental stations have been founded in Rabaul, Bita Paka, and in the Markham Valley. A laboratory and a herbarium have been established, and an entomologist has been appointed to deal with plant pests. With a view to the promotion of native agriculture, it is proposed to appoint three agricultural instructors and a specialist in cotton culture.

(*a*) *Tobacco.* This crop has been cultivated with success at Astrolabe Bay in North-East New Guinea, and in the Bismarck Archipelago. In 1893 there were 500 acres under tobacco, and the export reached 77 tons. Tobacco of high quality, rivalling the best Sumatra leaf, is said to have been produced. Later, the growing of tobacco on European plantations was abandoned, partly, it is said, for want of intelligent labour, although it continued to be grown by the natives for their own use.

(*b*) *Cotton.* The New Guinea Company experimented in the growing of cotton, and it is said that a product of high quality was obtained. In 1896 the export amounted to 60 tons. Efforts are now being made to re-introduce the industry. In 1924–25 the Government obtained 1,615 lb. of cotton seed, and experiments are being carried on at the experimental stations as well as by private planters, including a few natives. During the year 1924, 32 acres were planted with cotton.

(*c*) *Sisal Hemp.* There was a steady although small export of sisal hemp in German times. The quantity exported in 1913 was 10 tons, but none seems to have been exported since 1914. The principal plantation was at Melanua (Konstantinhafen) on Astrolabe Bay.

(*d*) *Cocoa.* Cocoa has been successfully grown, principally at Vitu (French Islands); in 1913, 137 tons were exported, and in 1924–25, 135 tons.

(*e*) *Coffee.* Coffee has been grown with success, but there has been little production.

(*f*) *Rubber.* On the mainland a small area has been planted with *Ficus elastica*, but in consequence of the low price of the inferior rubber produced from this source the trees are not being tapped.

(*g*) *Copra.* Indigenous in most of the islands, the coconut palm yielded copra to the traders from the beginning of European trade, and the plantations, commenced in 1883, have steadily extended in area and production, until 95 per cent. in value of the total exports of the Territory now consists of copra. The quantity exported in 1913 was 14,000 tons; in 1918, it was over 20,000 tons; and in 1924–25 it was 39,151 tons an increase of 4,177 over the figures for the previous year. The area under coconuts increased during the military occupation from 76,845 acres in 1914 to 133,960 acres at the end of 1918, and was, on 30th June, 1925, 171,526 acres, of which 102,813 were in bearing.

(*h*) *Other Crops.* The climate and soil of the Territory are suitable for the cultivation of rice, Manila hemp, cinchona, nutmeg, vanilla and maize, but hitherto their cultivation has either not advanced beyond the experimental stage or has been attempted on a small scale only. Sugar-cane of many varieties flourishes, and the natives cultivate extensive areas for their own use; other indigenous food-producing plants include the sago palm and the cassava.

(*i*) *Plants Yielding Power Alcohol.* It seems probable that alcohol for power purposes will be obtainable economically from the Territory. The sago palm and nipa palm yield as much as 60 gallons a ton, and in places are very abundant.

(ii) *Area of Plantations.* The area of plantations and the crops grown thereon are shown in the table hereunder for the year ended 30th June, 1925. The figures are exclusive of native plantations.

TERRITORY OF NEW GUINEA.—PLANTATIONS, 30th JUNE, 1925.

Particulars.		Government Plantations.	Privately owned Plantations.	Controlled by Expropriation Board.	Total.
Area of Holdings	acres	6,938	110,667	294,558	412,163
Area Cleared	,,	2,638	62,866	118,778	184,282
Area Cleared and Planted	,,	2,558	58,016	115,886	176,460
Coconuts—					
Area Planted	acres	2,555	55,490	113,481	171,526
Area Bearing	,,	1,080	33,560	68,173	102,813
Rubber—					
Area Planted	acres	..	279(*a*)	2,478(*a*)	2,757(*a*)
Area Bearing (*a*)	,,	..	..	..	..
Cocoa—					
Area Planted	acres	..	69	(*b*)	(*b*)
Area Bearing	,,	..	..	(*b*)	(*b*)
Coffee—					
Area Planted	acres	..	7	..	7
Area Bearing	,,	..	5	..	5
Cotton—					
Area Planted	acres	..	32	..	32
Area Bearing	,,	..	..	..	..
Maize—					
Area Planted	acres	..	176	..	176
Area Bearing	,,	..	102	..	102
Native Food—					
Area Planted	acres	109	1,751	(*c*)	1,751(*c*)
Area Bearing(*b*)	,,	..	945	..	945(*c*)

NOTE.—(*a*) Rubber not tapped. (*b*) Not available. (*c*) Native food of all kinds is mostly grown between young coconut palms not yet in bearing, therefore the total area cleared and planted does not agree with the detailed areas under various crops.

The area of plantations at various periods from 1885 to 1925 is shown hereunder. As in the case of the previous table, the figures are exclusive of native plantations :—

TERRITORY OF NEW GUINEA.—PLANTATIONS, 1885 TO 1925.

Year.	Total Area.	Area in Coconuts (including Area not in Bearing).
	Acres.	Acres.
1885	148	(*a*)
1895	2,152	(*a*)
1911	58,837	51,510
1914	84,941	76,845
1924	179,163	172,373
1925	176,460	171,526

(*a*) Not recorded.

3. **Live Stock.**—There is little natural pasture in the Territory, but the coconut plantations are now of a sufficient area to maintain numerous live stock, the stock being depastured on the indigenous grasses growing between the rows of trees. In 1925 there were 804 horses, 10,791 cattle, 3,312 sheep, 5,149 goats, and 6,245 pigs (exclusive of the large number of pigs kept by the natives). (See also Official Year Book No. 16, page 677.)

4. **Timber.**—An investigation of the timber resources of the Territory has been made by the Commonwealth Forestry Adviser, and a report in connexion therewith will probably be issued in 1926. The timber required for house and ship-building and for other purposes is mostly obtained locally. In North-East New Guinea the Neuendettelsauer Mission and the Holy Ghost Mission both possess up-to-date saw-milling plants, while most of the timber required in the Archipelago is supplied by the Sacred Heart Mission's saw-mill, and by a privately-owned mill, both at the eastern end of New Britain.

The Timber Ordinance 1922 provides for the issue of permits and licences to cut timber. Timber growing on native lands cannot be acquired by private purchasers directly from the natives, but must be obtained through the Administration. A royalty (the amount to be fixed by regulation) is to be paid on all timber exported.

5. **Fisheries.**—The wealth of the waters of the Territory has so far been little exploited. Fish is caught at many places along the coast to supply the small local demand of the natives and of the few resident Europeans. Pearl-shell is exported in fair quantities, while trepang, shark fins, trochus-shell, and tortoise-shell also figure amongst the exports. The value of marine products exported in 1924–25 was £17,279.

6. **Mining.***—There has been little mining in the Territory, and knowledge of the mineral resources is as yet but scanty. Gold has, however, been discovered on the Waria, the Ramu, the Francisco, and the Markham Rivers, etc. Osmiridium is reported to have been found on the upper tributaries of the Ramu, and platinum on the Kabenau River. Copper has been discovered in the form of chalcopyrite and malachite in the Baining District. Iron occurs as magnetite and hæmatite in the Baining District, apparently in large quantities. Sulphur occurs in several localities in the volcanic regions of the Territory. Phosphates suitable for use in the making of manures are found in the Purdy Islands. Brown coal has been found on the mainland in the vicinity of Astrolabe Bay, and in the southern portion of New Ireland.

Oil is known to exist, but so far it has not been discovered in payable quantities.

The goldfield is in the administrative district of Morobe, and the mineral fields comprise the districts of Aitape, Madang, Namatanai and Kieta.

From the goldfields of Morobe 7,417 ounces of gold, valued at £18,512, were exported in 1924–25. During the year ended 30th June, 1925, 35 miners' rights were issued, and four dredging and sluicing leases granted.

By the Mining Ordinance of 1923, private companies incorporated or registered in the Territory, two-thirds of whose shares are held by British subjects, became eligible to engage in prospecting and mining for mineral oil and coal. Up to the end of June, 1925, 26 licences to prospect for mineral oil and coal, covering an area of approximately 25,000 square miles, were held by various companies.

§ 8. Trade.

1. **Total Trade.**—The value of the imports, exports, and total trade at various periods since 1887, and during each of the last five years, is given in the table hereunder :—

TERRITORY OF NEW GUINEA.—TRADE, 1887 TO 1925.

Year.	Imports.	Exports.	Total.
	£	£	£
1887	17,133	19,580	36,713
1897	36,713	31,352	68,065
1907	166,585	97,563	264,148
1920–21	661,441	673,992	1,335,433
1921–22	468,711	499,197	967,908
1922–23	516,855	630,892	1,147,747
1923–24	485,634	718,535	1,204,169
1924–25	537,940	858,990	1,396,930

The import values are exclusive of money and Government stores. In 1924–25 the imports were distributed as follows :—From Australia, £470,574 ; America, £13,019 ; China, £20,976 ; Dutch New Guinea, £1,496 ; India, £29,394 ; Japan, £194 ; Papua, £2,260 ; Solomon Islands, £27.

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* Fuller details in regard to minerals in the Territory will be found in E. R. Stanley's Report on Salient Geological Features and Natural Resources of the Territory (printed as Appendix B. to the Report for 1921–22).

2. Principal Items of Import.—The principal items of import during each of the last five years are given in the following table :—

TERRITORY OF NEW GUINEA.—IMPORTS, VALUE OF ITEMS, 1920–21 TO 1924–25.

Commodities.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Foodstuffs	241,280	113,238	181,492	137,638	187,660
Beverages (non-alcoholic) ..	2,429	1,360	2,235	6,428	6,896
Alcoholic Liquors ..	39,841	29,703	30,414	28,587	24,459
Tobacco	53,446	41,392	50,746	39,564	43,430
Live Animals	845	4,276	1,351	1,114	3,319
Copra Sacks	20,555	23,152	15,701	18,428	25,960
Apparel	125,177	37,842	82,113	74,092	65,385
Oils	39,048	26,506	21,923	22,066	28,957
Hardware and Machinery ..	69,386	27,949	37,999(*e*)	52,347	39,946
Motor Cars and Accessories	20,141	11,953	14,579	8,604	13,094
Firearms, Ammunition, and Explosives	3,678	1,704	4,049	3,696	3,181
Timber and Building Materials	21,471	7,200	12,308	20,367	18,582
Paper and Stationery ..	4,366	4,459	5,918	7,082	7,575
Medicines and Drugs ..	10,300	10,290	18,919	11,529	17,237
Miscellaneous	9,478	17,687	33,002	50,710	50,263
Coal and Coke	(*a*)	(*b*)	4,106	3,382	1,996
Government Stores ..	(*a*)	110,000	(*a*)	(*a*)	(*a*)
Total	661,441(*c*)	468,711(*d*)	516,855	485,634	537,940

(*a*) Not recorded. (*b*) Not separately recorded, included in Government Stores. (*c*) Not including money or Government Stores. (*d*) Not including money. (*e*) Machinery included with Motor Cars.

3. Principal Items of Export.—Values of the principal items of export for the last five years are shown hereunder :—

TERRITORY OF NEW GUINEA.—EXPORTS, VALUE OF ITEMS, 1920–21 TO 1924–25.

Commodity.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Copra	641,045	474,110	619,715	686,519	815,938
Cocoa	9,105	9,465	3,734	3,602	6,949
Stone and Ivory Nuts	531	..	336	192	312
Rubber	2,900	..	..	..	..
Other Agricultural Products ..	20	..	..	..	..
Birds of Paradise and other Feathers	5,812	2,027	..	..	..
Mother of Pearl and other Marine Products	14,579	13,595	6,721	11,359	17,279
Gold	..	..	..	16,542	18,512
Miscellaneous	..	..	386	321	..
Total	673,992	499,197	630,892	718,535	858,990

4. **Exports of Copra, Cocoa, and Rubber.**—The next table shows the quantities, where available, of the exports of these items during the last five years :—

TERRITORY OF NEW GUINEA.—EXPORTS OF COPRA, COCOA, AND RUBBER, 1920–21 TO 1924–25.

Commodity.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	Tons.	Tons.	Tons.	Tons.	Tons.
Copra	23,735	25,894	32,648	34,974	39,151
Cocoa	133	152	83	70	135
Rubber	29	..	..	..	..

Of the 39,151 tons of copra exported in 1924–25, 28,279 tons went to countries other than Australia.

§ 9. Shipping and Communication.

1. **General.**—A subsidized mail service between the Territory and Australia is maintained by Burns, Philp and Co. Ltd.

2. **Oversea Tonnage in 1924–25.**—The number and net tonnage of oversea vessels which entered and cleared the Territory during the year 1924–25 are shown hereunder :—

TERRITORY OF NEW GUINEA.—SHIPPING, 1924–25.

Nationality.	Entered.		Cleared.		Total.	
	No.	Net Tonnage.	No.	Net Tonnage.	No.	Net Tonnage.
British	66	72,914	62	71,249	128	144,163
Chinese	2	7,568	2	7,568	4	15,136
Japanese	2	534	3	801	5	1,335
Norwegian	1	2,933	1	2,933	2	5,866
Total	71	83,949	68	82,551	139	166,500

Country from which Entered or for which Cleared.	Entered.		Cleared.		Total.	
	No.	Net Tonnage.	No.	Net Tonnage.	No.	Net Tonnage.
Australia	32	61,690	22	40,341	54	102,031
European Ports	..	..	8	23,970	8	23,970
Borneo	..	..	1	2,933	1	2,933
Canada	..	..	1	3,333	1	3,333
Caroline Islands	2	534	3	801	5	1,335
China	2	5,243	1	3,784	3	9,027
Dutch New Guinea ..	2	190	2	190	4	380
Fiji	1	4,165	..	..	1	4,165
Japan	..	..	1	1,611	1	1,611
Nauru	1	2,933	..	..	1	2,933
Rangoon (Burma)	1	1,922	..	..	1	1,922
Singapore	1	438	..	..	1	438
Solomon Islands	28	3,605	28	3,636	56	7,241
U.S.A.	1	3,229	1	1,952	2	5,181
Total	71	83,949	68	82,551	139	166,500

3. **Local Shipping.**—The Administration maintains a service of small steamers which bring cargo from outports to the ports of call of the oversea vessels, while there are also privately-owned schooners and launches.

4. **Land Communication.**—Means of communication on land are scanty. There are no railways. Roads lead from Rabaul to places within 30 or 40 miles, and there is a road 170 miles long in New Ireland. Elsewhere there are few roads outside plantations

and the stations of the District Officers. The large rivers of the mainland are as yet but little used.

There is a high power wireless station at Bita Paka near Rabaul, and low power stations at Kavieng, Kieta, Manus, Madang, Aitape, and Morobe. Since 1st July, 1921, all these have been placed under the control of Amalgamated Wireless (Australasia) Limited.

§ 10. Revenue and Expenditure.

1. **Revenue.**—Details of the revenue collected from various sources during each of the last five years are given hereunder :—

TERRITORY OF NEW GUINEA.—REVENUE, 1920–21 TO 1924–25.

Heading.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Trade and Customs—					
Imports	59,865	49,031	77,259	73,781	73,051
Exports	33,035	38,422	35,965	43,656	47,277
Total	92,900	87,453	113,224	117,437	120,328
Taxes and Fees—					
Licences	7,977	5,588	5,816	5,846	6,517
Business Tax	8,860	20,989	10,317	18,322	18,874
Law Department	1,416	1,942	2,205	1,488	1,628
Lands Department	4,438	6,858	3,132	6,717	15,537
Stamp Duties	..	1,000	507	500	1,262
Native Affairs—					
Head Tax	15,522	20,546	21,550	21,451	22,035
Indenture Fees	2,580	1,689	(*b*)12,191	(*b*)8,605	3,814
Fees and Fines	240				
Income Tax	..	209	644	677	897
Total	41,033	58,821	56,362	63,606	70,564
Miscellaneous—					
Trade and Customs	4,284	6,470	2,918	3,959	4,234
Post Office	3,852	6,348	2,328	4,040	5,574
Wireless Service	4,181	5,839	..	..	..
Receipts from Administration Shipping Services	23,921	36,599	26,951	15,532	2,607
Plantations	4,036	8,824	2,985	5,705	6,027
Hospital Receipts	4,845	2,884	7,148	10,785	7,236
Interest	164	..	..	..	..
Miscellaneous	14,741	(*a*)44,268	(*a*)29,815	(*a*)27,680	26,205
Total	60,024	111,232	72,145	67,701	51,883
GRAND TOTAL	193,957	257,506	241,731	248,744	242,775

(*a*) Including sale of stores. (*b*) Including hire of labour.

2. **Expenditure.**—The expenditure for the financial year 1924–25 was distributed as follows :—

TERRITORY OF NEW GUINEA.—EXPENDITURE, 1924–25.

Secretary and Central Administration	£17,635	Public Works	£32,812
Government Printer	1,980	Trade and Customs	11,339
Justice	3,326	Agriculture	7,987
Treasury	35,978	Public Health	28,189
Audit	3,382	District Services	82,474
Lands and Survey	12,714	Miscellaneous	2,575
Native Affairs, Police, and Prisons	10,511	Total ..	250,902

F. NAURU.

1. **General.**—Nauru is an oval-shaped atoll about 12 miles in circumference having an area of 5,400 acres, of which approximately four-fifths is phosphate-bearing. It is situated in long. 166° E., and is 26 miles south of the Equator. Portion of the island between the sandy beach and the coral cliffs is fertile, and it is there that the native Nauruans have established themselves. With the exception of a small fringe round an inland lagoon, the plateau which contains the phosphate deposits possesses few food plants and is uninhabited, but portion of the area has been planted with fruit trees. The system of land tenure is governed by old custom, and, with the exception of small allotments held by the Government and Missions, the whole of the island is owned by individual natives. The climate is hot, but not unpleasant, the average shade temperature ranging between 72 and 95° F., and the average humidity between 70 and 80. The average rainfall is 120 inches, but droughts occasionally occur, and in 1916 and 1917 only 40 inches were received for the two years.

2. **History.**—The island was annexed by Germany in 1888, and prior to 1914 was part of the protectorate of German New Guinea.

In November, 1914, Nauru was occupied by a detachment from the Australian Expedition at Rabaul; and it was included in the cession of colonies made by Germany in 1919 to the Allied and Associated Powers, whose representatives agreed that a mandate over it should be given to His Majesty the King. On 2nd July, 1919, the British, Commonwealth, and New Zealand Governments agreed that the administration of the island (which, since 1915, had been in charge of an official appointed by the British Colonial Office) should be vested in an Administrator; the first Administrator was appointed for a term of five years by the Australian Government; his term of service having expired in February, 1926, it was extended for another five years. The Agreement between the three Governments was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and is printed in the Schedule to that Act, and the first Administrator appointed by the Commonwealth Government assumed duty in June, 1921.

The Mandate for Nauru, issued by the Council of the League of Nations in December, 1920, is in terms similar to that for the Territory of New Guinea.

3. **Administration.**—The Administrator has all the powers of government—administrative, legislative, and judicial—in the island. An Advisory Council has been created which consists of two Europeans chosen by the Administrator, and two native chiefs elected by the natives. All expenses of administration are met from local revenue. Native industries such as canoe-building, fishing, mat-making, etc., are encouraged by the provision of prizes at annual competitions. A branch of the Commonwealth Savings Bank has been established, and the deposits by natives in 1925 amounted to £7,000, as compared with £4,154 in 1924. There is a co-operative store managed by the natives themselves, the books, however, being audited by Government officers. Natives are not allowed to carry firearms, and the use by them of intoxicating liquors and deleterious drugs is prohibited.

4. **Population.**—Figures for population from 1921 to 1925 are given hereunder:—

NAURU.—POPULATION, 1921 TO 1925.

Population.	Census of 24th April, 1921.	31st December, 1922.	31st December, 1923.	31st December, 1924.	31st December, 1925.
Europeans	119	128	110	125	124
Chinese	597	582	603	785	827
Nauruans(*a*)	1,084	1,156	1,179	1,219	1,239
Other South Sea Islanders ..	266	290	117	11	10

(*a*) The natives of Nauru are Micronesians.

The birth rate among the Nauruans in 1925 was 52 per 1,000, the death rate 27.44 per 1,000, and the rate of infantile mortality 339 per 1,000.

5. **Health.**—There is no malaria, but cases occur of other diseases known in the Pacific. Venereal disease is rare, but in 1925 there were 189 cases of leprosy in segregation, and a total of 365, or nearly 30 per cent., of the native population was under treatment. An area has been set apart for the segregation of lepers, and the latest methods of treatment are applied to cope with the disease. Two hospitals are maintained on the island, one by the Administration for Nauruans, and one by the European Phosphate Commission for its employees. In common with other natives, the Nauruans are very susceptible to tuberculosis and influenza, and in 1921 an influenza epidemic caused the deaths of 230 islanders. Dysentery, both amœbic and bacillary, is endemic. The usual steps are being taken by the authorities to improve the water supply and to provide efficient sanitation generally. A baby clinic has been established to give help and advice to Nauruan mothers in regard to infant nurture.

6. **Education.**—On the 1st October, 1923, the Administration took over the education of the Nauruans and other native children, and native schools were established in four districts. Previously education had been looked after by the Missions subsidized by the Government. A school for European children, 13 of whom were in attendance in 1925, is presided over by a teacher on loan from the Education Department of Victoria, who also supervises educational matters generally. The curriculum is similar to that of corresponding schools in Australia, and the teaching is, as far as possible, wholly in English. Education is compulsory between the ages of six and sixteen. After the termination of ordinary school attendance, twelve months are devoted to technical training. Officers from the Missions visit the schools to give religious and moral training. A museum for the preservation of Nauruan antiquities is in process of formation.

7. **Religion.**—The London Missionary Society (Protestant) and the Sacred Heart of Jesus Mission (Roman Catholic) operate in Nauru, and in 1925 the adherents to the former numbered 775, and to the latter 365.

8. **Phosphate Deposits.**—(i) *General.* The deposits were discovered in 1900, and were worked by the Pacific Phosphate Company, which also worked the deposits on Ocean Island (about 165 miles east of Nauru and part of the Gilbert and Ellice Islands Colony administered by the Colonial Office). The quantity on the two islands has been estimated at not less than 100,000,000 tons, and the rock phosphate, as shipped, averages 85 per cent. to 88 per cent. of tribasic phosphate of lime. About 4,000,000 tons have already been removed.

The interests of the Pacific Phosphate Company in the two islands (though not in other islands in the Pacific in which it has workings) were bought by the British, Commonwealth, and New Zealand Governments in 1919 for £3,500,000, the purchase money being contributed in the proportions of 42, 42, and 16 per cent. respectively. The Agreement of 2nd July, 1919, provides for the working of the deposits by the British Phosphate Commission of three members, one appointed by each Government; and the three countries are to receive the output in the same proportions of 42, 42, and 16 per cent.

(ii) *Output.* The output from the two islands in 1913, the last year before the war, was 350,000 tons. During the first four years of the Commission's management it was as follows:—

NAURU AND OCEAN ISLAND.—OUTPUT OF PHOSPHATES, 1921 TO 1924.

Year.	Total.	To Australia.	To New Zealand.	To United Kingdom.	To other Countries.
	Tons.	Per cent.	Per cent.	Per cent.	Per cent.
1920–21	364,251	72.96	4.69	4.59	17.76
1921–22	361,205	47.20	10.64	4.45	37.71
1922–23	311,650	65.43	16.54	..	18.03
1923–24	450,924	70.67	13.46	..	15.87

From Nauru alone, during the calendar year 1925, the export was 224,260 tons, of which 145,300 tons went to Australia, 64,260 tons to New Zealand, and 14,700 tons to foreign countries.

(iii) *Accounts of Commission.* A statement for the four years ended June, 1924, is given hereunder.

NAURU AND OCEAN ISLAND.—SALES OF PHOSPHATES, 1920-21 TO 1923-24.

Receipts from Sales of Phosphate, Etc.	1920–21.	1921–22.	1922–23.	1923–24.
	£	£	£	£
Receipts from sales, etc. ..	691,643	823,045	542,348	695,940
F.o.b. cost, including interest on capital, Sinking fund, etc. ..	688,958	732,407	538,099	651,102

The f.o.b. cost of phosphate was 37s. 10d. in 1920–21, 40s. 7d. in 1921–22, 34s. 6d. in 1922–23, and 28s. 10d. in 1923–24.

The amount due by the Commission to the partner Governments for purchase money and other capital sums was £3,666,457 on 30th June, 1921, and at 30th June, 1924, this had been reduced to £3,478,289. The contribution to the sinking fund paid by the Commission provides for interest at 6 per cent. and extinction of the capital sum in 50 years from 1st July, 1920.

(iv) *Employees.* The employees of the Commission at Nauru consist of 60 Europeans, 827 Chinese, and 10 natives of Pacific islands other than Nauru. A few Nauruans are from time to time employed, but they are not partial to sustained labour of any kind.

9. **Trade.**—Information regarding imports and exports for years 1921 to 1925 is appended herewith :—

NAURU.—IMPORTS AND EXPORTS, 1921 TO 1925.

Heading.	1921.	1922.	1923.	1924.	1925.
	£	£	£	£	£
Imports..	106,486	78,320	53,685	100,254	63,576
Exports—	tons.	tons.	tons.	tons.	tons.
Phosphate	187,680	182,170	212,300	280,990	224,260
Copra	..	93	121	383	170

10. **Revenue and Expenditure.**—The revenue and expenditure of the Administration during the years 1921 to 1925 were as follows :—

NAURU.—REVENUE AND EXPENDITURE, 1921 TO 1925.

Heading.	1921.	1922.	1923.	1924.	1925.
	£	£	£	£	£
Revenue	10,192	11,182	11,837	18,200	15,175
Expenditure	12,712	11,424	10,266	13,580	15,257

Of the revenue in 1925, £6,805 was royalty on phosphate, £2,859 consisted of Customs receipts, £1,109 of capitation taxes, and £680 of harbour dues. The total credit balance on the 31st December, 1925, amounted to £21,505.

CHAPTER XVI.

PASTORAL PRODUCTION.

§ 1. Initiation and Growth of Pastoral Industry.

1. **Early Statistics.**—In earlier issues of the Year Book will be found a brief reference to the pastoral industry in Australia prior to the year 1860. (See Year Book No. 6, page 330).

2. **Subsequent Statistics.**—While the statistical records of live stock in Australia prior to the year 1860 are somewhat defective, from that year onwards fairly complete particulars are available for most of the States. At the present time, statistics of live stock are collected annually in all the States principally through the agency of the police, but in the years 1885 to 1888 inclusive, and 1893 to 1895 inclusive, these particulars were not collected in South Australia, and similar gaps occur in the Victorian records for the periods 1895 to 1899 inclusive, and 1901 to 1903. In order to obtain totals for Australia for these years the missing numbers have been supplied by interpolation. The results so obtained probably differ but slightly from the actual numbers for the respective years.

3. **Increase in Live Stock.**.—Particulars concerning the numbers of each of the principal kinds of live stock in Australia at decennial intervals from 1860 to 1910, and from 1919 onwards in single years, are given in the following table, and are shown continuously in the graphs hereinafter.

During the sixty-four years covered by the table the live stock of Australia increased considerably, horses 431 per cent., cattle 236 per cent., sheep 363 per cent., and pigs 179 per cent. The average annual increases which these aggregates represent are as follows :—Horses, 2.65 per cent. ; cattle, 1.91 per cent. ; sheep, 2.42 per cent. ; and pigs, 1.62 per cent.

LIVE STOCK.—AUSTRALIA, 1860 TO 1924.

Year.	Horses.	Cattle.	Sheep.(*a*)	Pigs.
1860	431,525	3,957,915	20,135,286	351,096
1870	716,772	4,276,326	41,593,612	543,388
1880	1,061,078	7,523,000	62,176,027	815,776
1890	1,521,588	10,299,913	97,881,221	891,138
1900	1,609,654	8,640,225	70,602,995	950,349
1910	2,165,866	11,744,714	92,047,015	1,025,850
1919	2,421,201	12,711,067	75,554,082	695,968
1920	2,415,510	13,499,737	77,897,555	764,406
1921	2,438,182	14,441,309	82,226,470	960,385
1922	2,390,460	14,336,673	78,803,261	985,930
1923	2,327,440	13,357,508	80,110,461	897,874
1924	2,292,050	13,309,473	93,154,953	980,009

(*a*) See note to Table in § 4. 2 hereinafter.

4. **Fluctuations.**—The increases referred to, however, have not been continuous, marked fluctuations having taken place during the period mainly on account of the droughts which have from time to time left their impress on the pastoral history of Australia. These were in evidence in 1869, 1877, 1884, 1895, and subsequent years, 1902, 1908, 1912, 1914-15, 1918 to 1920, and again in 1922–23, in which latter years the interior of the Continent experienced one of the driest periods on record, and the mortality of stock was heavy.

As an offset to these visitations, good seasons invariably supervene on the dry periods, and the large natural increases occurring under these conditions greatly facilitate the process of restocking, thus bearing convincing testimony to the extraordinary recuperative powers of the country.

The years in which the numbers of live stock attained their maxima are as follows :—Horses, 1918, 2,527,149 ; cattle, 1921, 14,441,309 ; sheep, 1891, 106,421,068 ; and pigs, 1917, 1,169,365.

5. **Live Stock in Relation to Population.**—The number of each kind of live stock per head of the population of Australia has varied during the past sixty-four years in the manner shown in the succeeding table :—

LIVE STOCK PER HEAD OF POPULATION.—AUSTRALIA, 1860 TO 1924.

Year.	Horses.	Cattle.	Sheep.	Pigs.	Year.	Horses.	Cattle.	Sheep.	Pigs.
1860 ..	0.38	3.45	17.58	0.31	1919 ..	0.45	2.38	14.15	0.13
1870 ..	0.43	2.60	25.24	0.33	1920 ..	0.44	2.49	14.35	0.14
1880 ..	0.48	3.37	27.87	0.37	1921 ..	0.44	2.61	14.86	0.17
1890 ..	0.48	3.27	31.06	0.28	1922 ..	0.42	2.54	13.94	0.17
1900 ..	0.43	2.29	18.75	0.25	1923 ..	0.40	2.31	13.88	0.16
1910 ..	0.49	2.65	20.80	0.23	1924 ..	0.39	2.27	15.86	0.17

Considered in relation to population the most noticeable variations have been the largely reduced numbers of sheep and pigs in recent years, the reductions amounting to about one-half of the earlier figures. The number of cattle has also declined, and a decrease in the numbers of horses is in evidence since 1919.

6. **Live Stock in Relation to Area.**—The numbers of live stock per square mile in the several States and Territories of Australia are given in the following table :—

LIVE STOCK PER SQUARE MILE.

States and Territories.	Date.	Horses.	Cattle.	Sheep.	Pigs.
New South Wales ..	30th June, 1925 ..	2.09	9.28	151.68	1.10
Victoria	1st March, 1925 ..	5.38	18.27	143.94	3.28
Queensland.. ..	31st Dec., 1924 ..	0.98	9.63	28.38	0.23
South Australia ..	31st Dec., 1924 ..	0.67	1.05	16.73	0.21
Western Australia ..	31st Dec., 1924 ..	0.17	0.77	7.04	0.08
Tasmania	1st March, 1925 ..	1.41	8.61	61.57	1.80
Northern Territory ..	31st Dec., 1924 ..	0.09	1.63	0.01	0.00
Fed. Cap. Territory ..	30th June, 1925 ..	1.48	5.38	176.37	0.31
Total	1924	0.77	4.47	31.32	0.33

7. **Minor Classes of Live Stock.**—The numbers of minor classes of live stock returned for 1924 were as follows :—Goats, 231,258 ; camels, 11,853 ; mules and donkeys, 16,547 ; and ostriches, 674. Of these, goats were most numerous in Queensland ; camels, mules and donkeys in Western Australia ; and ostriches in South Australia. In the raising of goats, attention has in recent years been devoted to the angora goat and its product (mohair), and about 12,000 angora goats are included in the total of 231,258 goats shown above. Of these, 3,840 were in New South Wales, 917 in Tasmania, 1,695 in Western Australia, 1,674 in South Australia, and 3,511 in Queensland, while the quantity of mohair produced in the latter State in 1924 was set down at 1,782 lbs., and the number of skins placed on the market was returned as 519.

8. **Net Exports of Principal Pastoral Products.**—The quantities by which the exports of the principal pastoral products of Australia exceeded the imports for the years 1920–21 to 1924–25 are as follows :—

NET EXPORTS OF PASTORAL PRODUCTS.—AUSTRALIA, 1920–21 TO 1924–25.

Products.	Unit of Quantity.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
		QUANTITIES.				
Animals (living)—						
Cattle	No.	4,396	9,110	13,818	−71	9,674
Horses	,,	8,195	1,798	3,545	1,478	4,604
Sheep	,,	19,307	36,111	37,959	30,302	4,148
Bones	cwt.	24,160	21,718	23,276	26,158	23,748
Glue-pieces and Sinews	,,	−3,920	4,987	6,927	−1,993	−11,055
Glycerine	lb.	−854,254	19,348	343,292	−230,485	−489,113
Hair	,,	100,434	−126,037	(a)	(a)	(a)
Hoofs	cwt.	7,580	10,615	11,174	10,380	8,340
Horns	. .	(a)	(a)	(a)	(a)	(a)
Meats—						
Frozen Beef	lb.	179,618,149	124,158,191	152,925,321	105,145,255	283,584,278
Frozen Mutton and Lamb	,,	54,892,764	91,712,280	167,578,967	39,768,347	50,224,659
Frozen Rabbits and Hares	pair	3,925,004	4,857,404	4,264,054	3,489,496	3,415,334
Frozen, Other	lb.	7,901,468	6,676,605	13,062,037	6,687,005	9,141,545
Potted, and Extract of	. .	(a)	(a)	(a)	(a)	(a)
Preserved in Tins, etc.	lb.	8,296,500	9,133,860	10,583,164	4,268,814	8,687,019
Other (excluding Bacon and Ham)	,,	482,317	344,167	489,564	234,058	314,867
Sausage Casings	cwt.	(a)	(a)	24,623	13,213	26,860
Skins—						
Hides	No.	−8,317	80,415	47,900	665,466	900,274
Sheep	,,	5,117,431	6,780,522	10,237,162	6,891,162	6,016,231
Rabbit and Hare	cwt.	49,427	74,224	122,748	77,862	116,522
Other (including Undressed Furs)	. .	(a)	(a)	(a)	(a)	(a)
Tallow	cwt.	524,220	893,772	1,016,831	394,313	855,596
Wool—						
Greasy	lb.	417,647,343	710,591,430	597,429,649	478,210,488	489,669,907
Scoured	,,	61,525,697	102,346,835	106,319,965	41,735,194	39,221,259
Tops	,,	6,598,681	6,200,505	6,374,922	4,988,258	4,090,958

NOTE.—The minus sign — signifies net imports. (a) Quantity not available.

The values of the net exports for the same five years are furnished in the next table, and amount to no less a total than £317,539,567 for the period, or an average of £63,507,913 per annum, of which wool represents 81 per cent. Meat, skins, and tallow rank next in order of importance.

NET EXPORTS OF PASTORAL PRODUCTS.—AUSTRALIA, 1920–21 TO 1924–25.

Products.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	VALUES.				
Animals (living)—	£	£	£	£	£
Cattle	30,350	53,274	64,731	−31,430	43,628
Horses	137,497	−1,148	27,978	−36,741	28,062
Sheep	140,975	36,921	42,017	40,887	29,793
Bones	21,839	19,610	26,137	32,301	23,031
Glue-pieces and Sinews	302	7,883	13,725	21,688	10.363
Glycerine	−39,374	1,516	8,536	−5,965	−10,898
Hair	28,416	6,736	−62,830	−70,283	−73,556
Hoofs	8,180	7,120	8,137	7,723	6,011
Horns	29,609	34,418	35,388	32,888	47,216
Meats—					
Frozen Beef	3,819,094	1,867,681	1,794,104	1,301,304	4,138,729
Frozen Mutton and Lamb	1,578,634	2,139,537	4,320,977	1,169,667	1,520,655
Frozen Rabbits and Hares	432,745	407,143	321,329	320,442	310,683
Frozen, Other	190,795	128,451	189,170	95,127	165,002
Potted, and Extract of	9,649	−49,636	−40,170	−78,343	−49,953
Preserved in Tins etc.	380,694	324,275	266,273	94,094	247,405
Other (excluding Bacon and Ham)	16,741	10,852	10,577	5,798	4,058
Sausage Casings	−43,160	128,127	285,504	154,068	208,673
Skins—					
Hides	−113,202	122,471	249,208	338,263	890,639
Sheep	1,228,012	1,305,223	2,973,146	3,057,789	3,773,328
Rabbit and Hare	968,972	784,346	1,961,777	1,348,508	2,482,933
Other (including Undressed Furs)	715,656	288,633	785,467	798,166	328,325
Tallow	1,347,400	1,440,683	1,612,676	745,209	1,703,308
Wool—					
Greasy	25,298,176	38,970.130	45 769,295	48,294,399	55,297,455
Scoured	6,426,167	7,795,146	9,898,651	6,298,197	6,524,471
Tops	2,049,588	1,207,048	1,412,683	1,161,920	1,119,849
Total Values	44,663,755	57,036,440	71,974,486	65,095,676	78,769.210

NOTE.—The minus — sign signifies net imports.

§ 2. Horses.

1. **Suitability of Australia for Horse-breeding.**—From the earliest times the suitability of the climate and pastures of Australia for the production of serviceable breeds of horses has been fully recognized. By the importation of high-class sires, and the careful selection of breeding mares, these natural advantages are utilized to the fullest extent, all classes of horses being bred. As a consequence of this combination of advantages, the Australian horse, whether of the heavy draught, medium weight, or light saddle and carriage variety, compares more than favourably with the product of other lands. The Australian horse has been found suitable for the army in India, and large numbers are obtained annually for remount purposes. During the war, Australian horses were found to be well adapted for all purposes, especially in Palestine.

2. **Distribution throughout Australia.**—As regards numbers, the State of New South Wales, the earliest settled of the group, established a lead, which it retained till the year 1914, when it gave place to Queensland, where rapid progress had been in evidence during the previous decade. New South Wales regained the lead during the next three seasons, but Queensland again replaced the latter State in 1918, and has maintained its position during the past five seasons. Particulars of the several States for the past five years are as follows :—

HORSES.—NUMBER, 1920 TO 1924.

Year.	N.S.W. (*b*)	Vic. (*a*)	Q'land.	S. Aust.	W. Aust.	Tas. (*a*)	N.T.	F.C.T. (*b*)	Total.
1920	661,846	487,503	741,024	*b*268,187	178,664	39,117	37,837	1,332	2,415,510
1921	668,501	496,124	746,281	*b*267,639	180,334	38,439	39,565	1,299	2,438,182
1922	658,686	494,947	713,015	*b*264,150	181,159	37,313	39,845	1,345	2,390,460
1923	656,939	486,075	660,387	*b*258,489	181,944	37,570	44,603	1,433	2,327,440
1924	646,110	473,236	659,023	255,022	175,116	37,091	45,059	1,393	2,292,050

(*a*) 1st March year following. (*b*) 30th June year following.

The number of horses attained its maximum in Australia during 1918, when 2,527,149 were recorded. Since that date, however, a gradual decline has taken place in all divisions of the Commonwealth, except Northern Territory, the decrease for Australia during the period amounting to 235,099.

Particulars regarding the number of horses in Australia from 1860 onwards, may be ascertained from the graph herein.

3. **Proportions in the Several States and Territories.**—The percentages of the number of horses in the several States and Territories on the total for Australia for the past five years are as follows :—

HORSES.—PERCENTAGE IN EACH STATE, 1920 TO 1924.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	F.C.T.	Total.
	%	%	%	%	%	%	%	%	%
1920 ..	27.40	20.18	30.68	11.10	7.40	1.62	1.57	0.05	100.00
1921 ..	27.42	20.35	30.61	10.98	7.40	1.57	1.62	0.05	100.00
1922 ..	27.55	20.70	29.83	11.05	7.58	1.56	1.67	0.06	100.00
1923 ..	28.23	20.88	28.37	11.11	7.82	1.61	1.92	0.06	100.00
1924 ..	28.19	20.65	28.75	11.13	7.64	1.62	1.96	0.06	100.00

The relative changes in distribution are insignificant, the only alteration during the last four years being a decrease of 1¾ per cent. in Queensland, occasioned by increases in New South Wales, Victoria, Western Australia and the Northern Territory.

4. **Relation to Population.**—In proportion to population, horses are much more numerous in the Northern Territory than in any other of the principal divisions of Australia. Queensland is next in order, while Tasmania has the smallest number of

horses per head. The number per head of population has declined in all the statistical divisions, with the exception of Northern Territory, since 1920. Particulars for the past five years as follows :—

HORSES.—NUMBER PER HEAD OF POPULATION, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	All States.
1920 ..	0.31	0.32	0.99	0.54	0.54	0.18	9.48	0.52	0.44
1921 ..	0.31	0.32	0.97	0.53	0.54	0.18	10.59	0.45	0.44
1922 ..	0.30	0.31	0.90	0.51	0.53	0.17	11.22	0.41	0.42
1923 ..	0.30	0.30	0.81	0.49	0.51	0.17	12.55	0.39	0.40
1924 ..	0.29	0.29	0.79	0.47	0.48	0.17	12.60	0.46	0.39

5. **Comparison with other Countries.**—The number of horses in some of the leading horse-breeding countries of the world, according to the latest available returns, is as follows :—

HORSES.—NUMBER IN PRINCIPAL COUNTRIES.

Country.	Date.	Number of Horses (,000 omitted.)	Country.	Date.	Number of Horses (,000 omitted.)
Soviet Republics ..	1924	22,232	Cuba	1923	844
U.S. of America ..	1925	15,778	Sweden	1920	728
Argentine Republic ..	1921	9,432	Dutch East Indies	1922	721
Brazil	1920	5,254	Spain	1924	634
China	1916	4,401	Turkey	1919	630
Germany	1925	3,915	Uruguay ..	1919	555
Canada	1925	3,554	Denmark ..	1925	538
Poland	1921	3,290	Czecho-Slovakia ..	1921	529
France	1924	2,859	Colombia ..	1915	526
Australia	**1924**	**2,292**	Paraguay ..	1919	490
India (British and			Lithuania ..	1924	482
Native) ..	1924	2,156	Finland	1924	403
Rumania	1925	1,875	Bulgaria	1920	398
Japan	1923	1,592	Mexico	1924	391
United Kingdom ..	1925	1,447	Netherlands ..	1921	364
Jugo-Slavia ..	1925	1,106	Latvia	1924	340
Italy	1919	990	Irish Free State ..	1925	335
Hungary	1925	876	Chile	1922	329
Union of South Africa	1923	858	New Zealand ..	1925	327

6. **World's Totals.**—Several countries do not issue annual statistics of live stock, the information available consisting of censuses or estimates made at varying intervals. It is not possible, therefore, to give world aggregates for the different classes of stock year by year, nor to make a satisfactory comparison between the totals for consecutive years. In order, however, to give some idea of the latest position as regards live stock and the changes that have taken place as compared with pre-war years, the following information has been taken from the report issued by the International Institute of Agriculture. The list of countries included is fairly complete, but China, which possesses large numbers of horses, is omitted, also certain parts of Asiatic Russia, together with a few other countries. While for some countries the figures are the result of careful

enumeration, in the case of others they are merely approximate. The totals, therefore, can be regarded as a general indication only of the position at the dates shown. The figures for horses are as follows :—

HORSES.—WORLD'S TOTALS, 1913 AND 1924.

Continents, &c.	Number at the date nearest—		Increase (+) or Decrease (—) in 1924.	
	1913.	1924.	Actual Figures.	Percentages.
	,000	,000	,000	%
Europe	44,206	39,568	— 4,638	—10.5
North and Central America	27,631	26,945	— 686	— 2.5
South America	18,132	17,056	— 1,076	— 5.9
Asia	12,197	10,349	— 1,848	—15.2
Africa	1,661	1,984	+ 323	+19.4
Oceania	2,969	2,698	— 271	— 9.1
Total	106,796	98,600	— 8,196	— 7.7

The figures show a decrease in all cases except Africa, where the numbers are relatively small.

7. **Oversea Trade in Horses.**—(i) *Exports.* Australia's export trade in horses is not nearly as large as formerly, and is somewhat fluctuating. During the past five years it has varied in number between 8,302 in 1920–21 and 1,785 in 1923–24, and in value between £186,943 in the former and £59,799 during the latter year. The total number of horses exported during the five years amounted to 20,976, valued at £585,353, or equal to an annual average of 4,195 for £117,071. The average export price for the period was £27 18s. 1d. Nearly 77 per cent of the horses exported went to India, where they are largely used for remount purposes.

(ii) *Imports.* The number of horses imported into Australia is comparatively small, consisting mainly of valuable animals introduced for breeding purposes, principally from the United Kingdom and New Zealand. The average value per head of the horses imported during the last five years was £316 17s. 10d., as compared with £27 18s. 1d. per head for the exports for the same period. The average number imported per annum was, however, only 271, and the average annual value, £85,941. The following table gives the imports, exports, and net exports of horses during each of the years from 1920–21 to 1924–25 :—

HORSES.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1920–21	107	49,446	8,302	186,943	8,195	137,497
1921–22	277	69,382	2,075	68,234	1,798	— 1,148
1922–23	309	81,685	3,854	109,663	3,545	27,978
1923–24	307	96,540	1,785	59,799	1,478	— 36,741
1924–25	356	132,652	4,960	160,714	4,604	28,062

NOTE.—The minus sign — signifies net imports.

§ 3. Cattle.

1. **Purposes for which Raised.**—In all the States, cattle-raising is carried out on a more or less extensive scale, the main objects in certain districts being the production of stock suitable for slaughtering purposes, and in others the raising of profitable dairy herds. The great impetus which the development of the export trade in Australian butter gave to the dairying industry led to a considerable increase in numbers and improvement in quality of the dairy herds in Victoria, New South Wales, and Southern Queensland in particular, the portion of Australia in the temperate zone being the best adapted to this industry. On the other hand, by far the finest specimens of beef-producing cattle are those raised in the tropical districts, *i.e.*, in the northern parts of Queensland, in the Northern Territory, and in the Kimberley districts in the north of Western Australia.

2. **Distribution throughout Australia.**—Until 1880 New South Wales occupied the leading position as a cattle-raising State, but in that year Queensland took first place, which it has since maintained. The graph herewith shows a rapid increase in the number of cattle in Australia up to the year 1894, when 12,311,617 head were depastured. From 1895 onwards, however, the effects of droughts and the ravages of tick fever reduced the number to 7,062,742 in 1902. Following the disastrous drought which terminated in the latter year, the herds were gradually built up, and despite recurring droughts, they continued to increase in recent years until the maximum number of 14,441,309 cattle was attained in 1921. The decline in the frozen beef trade and the drought of 1922–23, which particularly affected the beef cattle areas of New South Wales and Queensland, were mainly responsible for the heavy decreases recorded in both these States during the past three years.

The numbers of cattle in the several States and Territories during each of the last five years are as follows :—

CATTLE.—NUMBER, 1920 TO 1924.

Year.	N.S.W. (*b*)	Victoria. (*a*)	Q'land.	S. Aust.	W. Aust.	Tas. (*a*)	Nor. Ter.	Fed. Cap. Ter. (*b*)	Total.
1920	3,367,880	1,575,159	6,455,067	(*b*)376,399	849,803	208,202	659,840	7,387	13,499,737
1921	3,538,240	1,750,369	7,047,370	(*b*)419,197	893,108	216,704	568,031	8,290	14,441,309
1922	3,244,905	1,785,660	6,955,463	(*b*)425,811	939,596	218,197	760,766	6,275	14,336,673
1923	2,932,437	1,591,367	6,396,514	(*b*)413,272	953,764	220,351	843,718	6,085	13,357,508
1924	2,871,196	1,605,554	6,454,653	400,423	891,564	225,740	855,285	5,058	13,309,473

(*a*) 1st March year following. (*b*) 30th June year following.

3. **Proportion in each State.**—Percentages showing the relative importance of the various cattle-breeding States during the years 1920 to 1924 are given hereunder :—

CATTLE.—PERCENTAGE IN EACH STATE, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor.Ter.	Fed. Cap. Ter.	Total.
	%	%	%	%	%	%	%	%	%
1920 ..	24.95	11.67	47.82	2.79	6.29	1.54	4.89	0.05	100.00
1921 ..	24.50	12.12	48.80	2.90	6.19	1.50	3.93	0.06	100.00
1922 ..	22.63	12.46	48.52	2.97	6.55	1.52	5.31	0.04	100.00
1923 ..	21.95	11.91	47.89	3.09	7.14	1.65	6.32	0.05	100.00
1924 ..	21.57	12.06	48.50	3.01	6.70	1.69	6.43	0.04	100.00

Queensland contains within its borders nearly one half of the cattle-herds of Australia. Despite decreases during recent years the percentage of cattle in Queensland on the total for Australia amounted to 48.50 in 1924. The largest relative gain since 1920 occurred in the Northern Territory, where the number has considerably increased during the past three seasons.

4. **Relation to Population.**—The number of cattle per head of population differs considerably in the several States, as may be seen from the following table :—

CATTLE.—NUMBER PER HEAD OF POPULATION, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	All States.
1920 ..	1.60	1.03	8.58	0.76	2.57	0.98	165.29	2.86	2.49
1921 ..	1.65	1.12	9.15	0.83	2.66	0.99	152.00	2.84	2.61
1922 ..	1.48	1.12	8.82	0.82	2.73	1.00	214.24	1.93	2.54
1923 ..	1.32	0.98	7.89	0.78	2.70	1.01	237.33	1.65	2.31
1924 ..	1.27	0.97	7.73	0.74	2.45	1.03	237.75	1.69	2.27

5. **Comparison with other Countries.**—In the following comparison of the herds of Australia with those of some of the principal cattle-raising countries of the world, the latest available figures have been inserted in each case :—

CATTLE.—NUMBER IN VARIOUS COUNTRIES.

Country.	Date.	No. of Cattle (,000 omitted).	Country.	Date.	No. of Cattle (,000 omitted).
India (British and Native	1923	143,175	Czecho-Slovakia ..	1920	4,391
U.S. of America ..	1925	59,829	French Equatorial and West Africa ..	1923	4,165
Soviet Republics ..	1924	46,235	Irish Free State ...	1925	3,991
Argentine Republic ..	1922	37,065	Dutch East Indies ..	1922	3,990
Brazil	1920	34,271	Tanganyika Territory	1923	3,800
Germany	1925	17,183	Siam	1924	3,799
China	1921	15,973	Jugo-Slavia ..	1925	3,768
France	1924	14,025	Turkey	1919	3,740
Australia	**1924**	**13,309**	New Zealand ..	1925	3,504
Colombia	1922	9,428	Spain	1924	3,469
Union of South Africa	1923	9,315	Kenya	1924	3,211
Canada	1925	9,307	Denmark	1925	2,756
Uruguay	1924	8,432	Nigeria	1923	2,747
Poland	1921	8,063	Sweden	1920	2,737
United Kingdom ..	1925	8,034	Venezuela	1921	2,600
Madagascar	1923	7,367	Mexico	1924	2,188
Italy	1919	6,239	Austria	1923	2,162
Paraguay	1919	5,500	Netherlands ..	1921	2,063
Rumania	1925	5,049	Rhodesia	1924	2,009
Cuba	1924	4,600			

6. **World's Totals.**—The information in the appended table has been taken from the returns published by the International Institute of Agriculture at Rome. The figures given therein are subject to the limitations previously noted in respect to horses (See § 2. No. 6 *ante.*)

CATTLE.—WORLD'S TOTALS, 1913 AND 1924.

Continents, etc.	Number at the date nearest—		Increase (+) or Decrease (—) in 1924.	
	1913.	1924.	Actual Figures.	Percentages.
	,000	,000	,000	
Europe	129,695	137,102	+ 7,407	+ 5.7
North and Central America	79,074	89,440	+10,366	+13.1
South America	85,978	101,486	+15,508	+18.0
Asia	168,911	167,065	— 1,846	— 1.1
Africa	32,816	44,563	+11,747	+35.8
Oceania	13,841	17,269	+ 3,428	+24.8
Total	510,315	556,925	+46,610	+ 9.1

Compared with the returns for 1913, increases were recorded in 1924 in all divisions with the sole exception of Asia, where there was a decline of 1 per cent., due principally to the falling off in the figures for India and Asiatic Russia. The chief increases in percentages were shown by Africa and Australia.

7. **Imports and Exports of Cattle.**—Although the various products of the cattle-raising industry bulk largely in the export trade of Australia, the export of live cattle has never been considerable. The number of cattle imported is also small, consisting, as in the case of horses, mainly of valuable animals for the purpose of breeding. Details are as follows :—

CATTLE.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1920–21 ..	127	10,979	4,523	41,329	4,396	30,350
1921–22 ..	108	10,769	9,218	64,043	9,110	53,274
1922–23 ..	147	18,856	13,965	83,587	13,818	64,731
1923–24 ..	2,683	46,684	2,612	15,254	−71	−31,430
1924–25 ..	70	2,318	9,744	45,946	9,674	43,628

NOTE.—The minus sign — signifies net imports.

The importation of fat cattle from New Zealand for the Melbourne market was the cause of the relatively large import in 1923–24. Omitting these unusual shipments the average value of the cattle imported during the last five years was £98 15s. 10d. per head, while the average value of the cattle exported during the same period was £6 4s. 11d. As previously stated, the imported cattle were required principally for stud purposes.

8. **Cattle Slaughtered.**—The number of cattle slaughtered during each of the years 1920 to 1924 is given hereunder :—

CATTLE (INCLUDING CALVES) SLAUGHTERED, 1920 TO 1924.

Year.	N.S.W. (*a*)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (*a*)	N. Ter.	Fed. Cap. Ter. (*a*)	Total.
1920	525,981	374,545	449,103	*a*90,944	68,055	27,468	1,330	74	1,537,500
1921	631,699	331,707	499,992	*a*95,323	54,640	33,566	2,445	90	1,649,462
1922	738,908	424,199	504,394	*a*127,294	79,823	31,026	1,587	142	1,907,373
1923	752,376	461,958	566,452	*a*140,979	90,833	33,729	2,500	113	2,048,940
1924	818,683	499,840	893,169	155,050	95,648	36,154	6,630	143	2,505,317

(*a*) For year ended 30th June of year following.

9. **Production and Consumption of Beef.**—The production of beef in Australia during the three years ended 1924–25 was estimated at 1,090,081,223 lbs. per annum. The requirements of the local market absorbed 903,162,333 lbs., or nearly 83 per cent. leaving a balance of slightly more than 17 per cent., which was exported as frozen and canned beef. The annual consumption of beef per head of population in Australia averaged 157 lbs. compared with 70 lbs. in the United States of America, 71 lbs. in Canada, and 64 lbs. in the United Kingdom for the same period.

10. **Export of Beef Preserved by Cold Process.**—The establishment of the frozen meat export trade about the year 1882 provided an outlet for the surplus stock of Australia, and since that date the trade in frozen beef has grown to large proportions, the quantities exported during the five years 1920–21 to 1924–25 being as follows :—

BEEF PRESERVED BY COLD PROCESS.—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Country to which Exported.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	Total for 5 years.
			QUANTITY.			
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	156,316,163	108,671,867	112,316,545	62,286,753	175,276,049	614,867,377
Italy	3,096,341	..	67,315	8,511,922	48,938,055	60,613,633
Belgium	..	..	2,452,475	7,728,342	25,679,301	35,860,118
Philippine Islands	2,479,724	8,093,851	4,780,134	8,442,695	8,117,712	31,914,116
Germany	..	..	17,321,705	5,437,988	6,777,898	29,537,591
Egypt	10,202,633	1,904,187	5,228,357	3,242,520	6,406,583	26,984,280
Malaya (British) ..	3,305,162	2,392,991	2,215,561	1,908,621	2,012,101	11,834,436
Hawaiian Islands ..	2,437,135	554,698	2,089,605	230,274	996,735	6,308,447
Malta	..	..	1,223,563	2,007,894	3,006,897	6,238,354
France	..	783,824	1,802,192	625,223	2,909,841	6,121,080
Hong Kong ..	849,904	610,785	511,417	1,444,881	382,390	3,799,377
Gibraltar	..	..	353,354	1,254,888	929,137	2,537,379
Japan	47,481	213,295	398,301	884,679	981,672	2,525,428
Ceylon	530,636	322,010	456,739	319,546	309,781	1,938,712
Other Countries ..	377,300	619,845	1,733,404	837,714	896,535	4,464,798
Total ..	179,642,479	124,167,353	152,950,667	105,163,940	283,620,687	845,545,126

BEEF PRESERVED BY COLD PROCESS.—EXPORTS, AUSTRALIA—*continued.*

Country to which Exported.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	Total for 5 years.
			VALUE.			
	£	£	£	£	£	£
United Kingdom ..	3,302,283	1,616,075	1,285,049	734,814	2,552,775	9,490,996
Italy	62,575	..	842	115,819	725,510	904,746
Belgium	..	..	27,314	96,270	366,488	490,072
Philippine Islands	56,032	133,696	60,843	105,971	103,781	460,323
Egypt	207,643	24,431	67,684	45,858	93,805	439,421
Germany.. ..	..	..	202,119	65,054	105,496	372,669
Malaya (British) ..	71,099	44,687	34,552	28,980	32,496	211,814
Hawaiian Islands ..	77,784	7,280	28,412	3,955	16,386	133,817
Malta	..	..	14,265	30,658	46,872	91,795
France	..	9,798	21,720	7,101	44,539	83,158
Hong Kong ..	18,553	11,117	6,771	19,537	5,567	61,545
Ceylon	13,478	6,111	8,455	6,405	5,868	40,317
Gibraltar.. ..	..	..	4,214	14,853	15,458	34,525
Japan	1,152	3,892	5,340	12,603	10,806	33,793
Other Countries ..	9,242	10,840	27,155	14,001	14,240	75,478
Total ..	3,819,841	1,867,927	1,794,735	1,301,879	4,140,087	12,924,469

The figures for 1924–25 reveal a remarkable revival in the beef export trade. Not only were the quantities exported greatly in excess of the shipments during the past five years, but the clearances effected have only once been exceeded in the history of the trade, viz., in 1914–15, when 292,066,489 lbs. were despatched abroad. The increase can be attributed in part to the better prices paid for export cattle, and to the favourable climatic conditions prevailing over a large section of pastoral country during the years 1924 and 1925. The largest purchaser of Australian beef is the United Kingdom, which during the five years ended 1924–25 took £9,490,996 worth, or more than 73 per cent. of the total shipments. A satisfactory feature of the trade was the increased quantities taken by European countries other than the United Kingdom in 1923–24 and 1924–25, the value of the exports thereto in the latter year amounting to £1,304,363 or nearly 32 per cent. of the total exportation.

11. **Beef Subsidy.**—The prices ruling for frozen beef in England early in 1922 were so low that it became unprofitable to export Australian beef. A succession of good seasons had stocked the country to capacity, and the failure of the export treatment works to absorb the surplus greatly depressed the beef industry. In order to assist cattle growers, the Commonwealth Government in September, 1922, passed the Meat Export Bounties Act which provided for the payment of a subsidy of ¼d. per lb. on all frozen or canned beef exported or placed in cool stores for export, and 10s. per head on live cattle exported for slaughter, from April to December, 1922. The granting of the subsidy was made conditional on reductions of ¼d. per lb. being effected in both the cost of treating and of shipping the meat. The bounty was renewed in 1923 on similar conditions to those in 1922. Although the amount of the bounty was small, it gave an acceptable measure of relief to the cattle industry. Many of the works were able to operate, and more than 200,000 head of cattle were treated each year, which would otherwise have remained to accentuate the existing depression. The bounty paid during 1922 amounted to £117,245 17s. 5d. for frozen beef, and £4,521 10s. for live cattle, while in 1923 £137,939, including £1,039 paid in 1924–25, was distributed for frozen beef, and £3,632 for live cattle. The Government withdrew the bounty on frozen and canned beef exported during the 1924 season, but the provision for live cattle exported for slaughter was again renewed, and £3,991 was paid in respect of such shipments, while a further renewal in 1925 resulted in a payment of £919 being made for the exportation of live cattle from Australia.

§ 4. Sheep.

1. **Initiation of the Pastoral Industry.**—Fortunately for Australia, the suitability of its climate and general conditions for the production of a high class of wool was, at an early date in the history of its settlement, surmised and tested by Captain Macarthur, one of the pioneer sheep-breeders of New South Wales. To the energy of this enterprising pastoralist is due in large measure the rapid and extremely satisfactory development of Australia as a producer of fine wool, and, while it would appear that the introduction of the merino sheep into Australia was not due to Macarthur, a great deal of the credit for having successfully established the pastoral industry in Australia must certainly be his.

2. Distribution throughout Australia.—With the exception of a short period in the early sixties, when the flocks of Victoria outnumbered those of the mother State, New South Wales has maintained the lead in sheep-raising which naturally attached to it as the portion of Australia in which settlement was first effected. The number of sheep in New South Wales generally represents more than half the total for Australia, and this ratio obtains in the returns for the latest year available.

Fluctuations in the number of sheep recorded for each year in Australia from 1860 onwards may be seen from the graph accompanying this chapter. Five marked periods of decline greatly reduced the numbers at successive intervals, but these losses were quickly regained, and, despite a decrease of 3½ millions during the drought of 1922, the number reported early in 1925 amounted to 93,154,953. In 1891 the number attained its maximum, viz., 106,421,068. There has been no approach to that figure in recent years, but it is generally considered that the flocks in 1891 were in excess of the reasonable sheep-carrying capacity of the country. The rapid growth of the frozen mutton and lamb industry precludes the building up of Australia's flocks to such large dimensions as heretofore, but the satisfactory prices realized for wool coupled with the favourable seasons resulted in a considerable increase during 1924 and 1925.

The number of sheep in the several States and Territories for each year from 1920 to 1924 was as follows :—

SHEEP.—NUMBER, 1920 TO 1924.

Year.	New South Wales. (*b*)	Victoria. (*a*)	Queensland.	South Australia.	Western Australia.	Tasmania. (*a*)	Nor. Ter.	Fed. Cap.Ter. (*b*)	Total.
1920	33,691,838	12,171,084	17,404,840	*b*6,359,944	6,532,965	1,570,832	6,062	159,990	77,897,555
1921	37,025,716	12,325,818	18,402,399	*b*6,257,052	6,506,177	1,551,273	6,349	151,686	82,226,470
1922	34,723,684	11,765,520	17,641,071	*b*6,305,133	6,664,135	1,558,494	6,161	139,063	78,803,261
1923	37,407,013	11,059,761	16,756,101	*b*6,596,875	6,595,867	1,557,716	4,728	132,400	80,110,461
1924	46,934,210	12,649,898	19,028,252	6,359,240	6,396,564	1,614,085	6,914	165,790	93,154,953

(*a*) 1st March, year following. (*b*) 30th June, year following.

In New South Wales during recent years it was found that the numbers of sheep had been to some extent understated by pastoralists in their annual returns, and the statistics for 1924–25 were, therefore, compiled from data independent of owners' statements. Effective comparisons between the figures for this and earlier years will consequently depend on the result of the further inquiries at present being made.

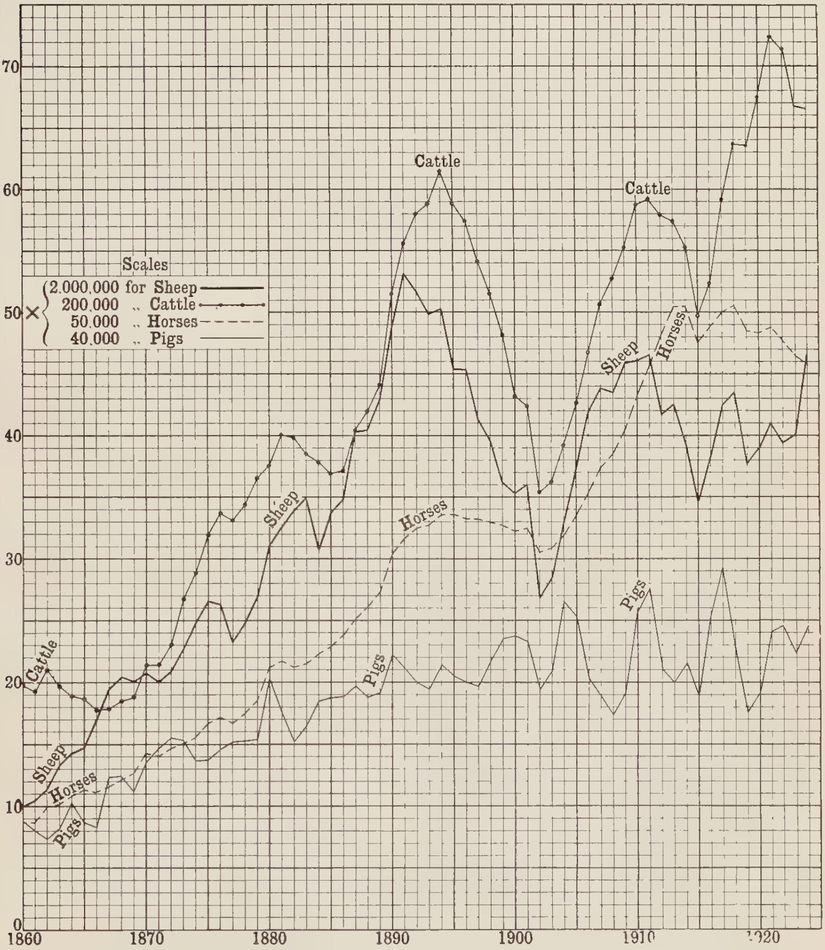
3. Proportion in the Several States and Territories.—Particulars concerning the relative positions of the several States and Territories with respect to the total flocks of Australia during the years 1920 to 1924 are given hereunder :—

SHEEP.—PERCENTAGE IN EACH STATE, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Total.
			%		%	%	%	%	
1920 ..	43.25	15.62	22.34	8.16	8.39	2.02	0.01	0.21	100.00
1921 ..	45.03	14.99	22.38	7.61	7.91	1.89	0.01	0.18	100.00
1922 ..	44.06	14.93	22.38	8.00	8.46	1.98	0.01	0.18	100.00
1923 ..	46.69	13.81	20.92	8.23	8.23	1.94	0.01	0.17	100.00
1924 ..	50.38	13.58	20.42	6.83	6.87	1.73	0.01	0.18	100.00

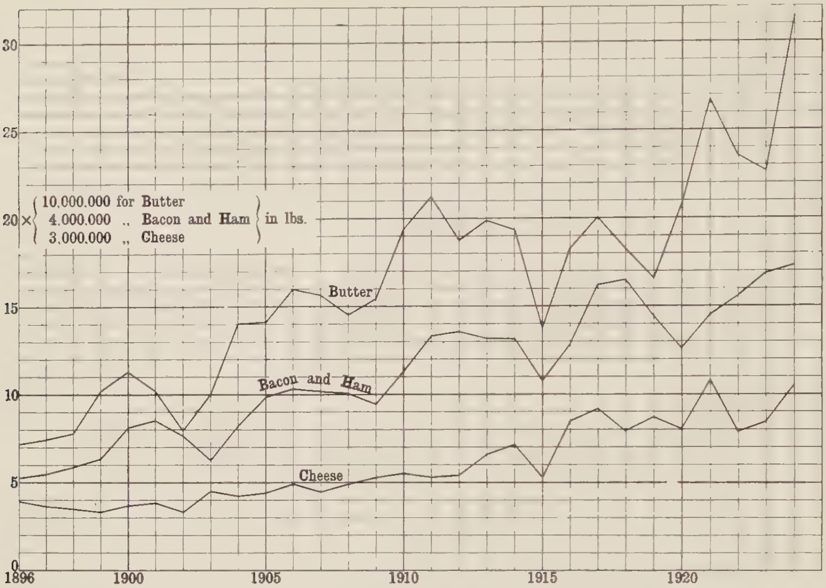
Apart from the effect of drought the percentage of sheep depastured in the different States shows little change. The most noteworthy alteration was a gain of 7.13 per cent. in New South Wales mainly at the expense of Queensland and Victoria. The percentage increase in New South Wales is, however, subject to alteration on account of the defects in the returns alluded to above.

NUMBER OF HORSES, CATTLE, SHEEP, AND PIGS—AUSTRALIA, 1860 TO 1925.



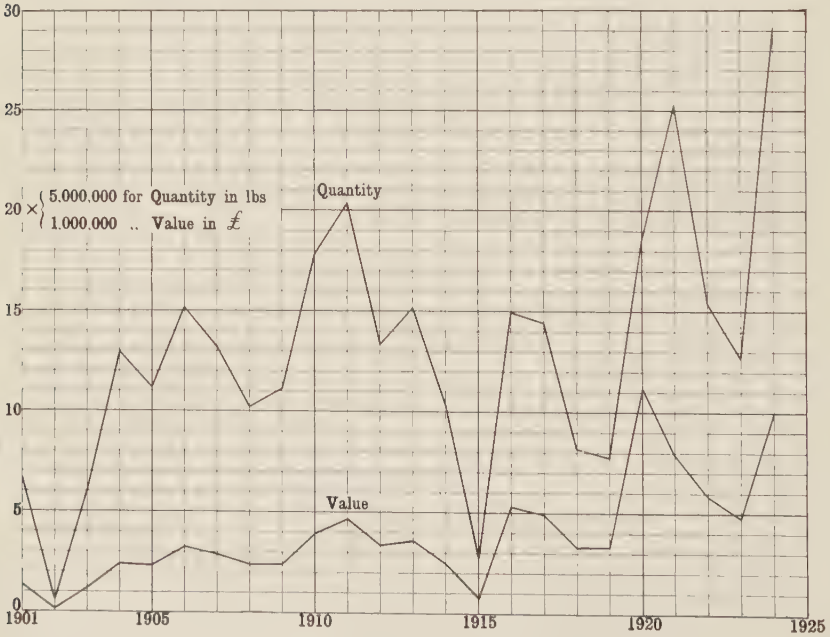
EXPLANATION. –The base of each small square represents an interval of one year, and the vertical side 2,000,000 in the case of sheep, 200,000 for cattle, 50,000 for horses, 40,000 for pigs.

PRODUCTION OF BUTTER AND CHEESE, AND BACON AND HAM—AUSTRALIA, 1896 TO 1924.



EXPLANATION.—The base of each small rectangle represents an interval of one year, and the vertical height of each denotes in the case of butter 10,000,000 lbs.; in the case of bacon and ham 4,000,000 lbs.; and in the case of cheese 3,000,000 lbs.

QUANTITY AND VALUE OF NET EXPORTS OF BUTTER FROM AUSTRALIA, 1901 TO 1924.



EXPLANATION.—The base of each small rectangle represents an interval of one year, and the vertical height of each 5,000,000 lbs. in weight, or £1,000,000 in value.

4. **Relation to Population.**—The relation of the flocks of the several States and Territories to the population at the end of each year from 1920 to 1924 is as follows :—

SHEEP.—NUMBER PER HEAD OF POPULATION, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Total.
1920 ..	16.03	7.96	23.14	12.78	19.75	7.38	1.52	62.04	14.35
1921 ..	17.24	7.95	23.90	12.39	19.41	7.10	1.70	52.05	14.86
1922 ..	15.86	7.40	22.38	12.20	19.39	7.12	1.74	42.72	13.94
1923 ..	16.80	6.80	20.66	12.47	18.64	7.11	1.33	35.97	13.88
1924 ..	20.82	7.64	22.79	11.81	17.57	7.34	1.92	55.30	15.86

5. **Comparison with other Countries.**—As regards the size of its flocks, and the quantity and quality of wool produced, Australia has long occupied the leading position amongst the sheep-raising countries of the world. The following comparison taken mainly from the Year Book of the International Institute of Agriculture gives the latest figures relative to the number of sheep in the principal wool-producing countries :—

SHEEP.—NUMBER IN VARIOUS COUNTRIES.

Country.	Date.	No. of Sheep (,000 omitted).	Country.	Date.	No. of Sheep (,000 omitted).
Australia	1924	93,155	Soudan (Anglo-Egyptian)	1924	8,214
Soviet Republics ..	1924	67,084	Brazil	1920	7,933
U.S. of America	1925	40,748	Jugo-Slavia ..	1925	7,907
Argentine Republic ..	1922	36,209	French Equatorial and West Africa ..	1924	6,827
India (British and Native)	1923	33,537	Greece	1921	5,789
Union of South Africa	1923	31,224	Germany	1925	4,742
New Zealand ..	1925	24,548	Algeria	1924	4,605
United Kingdom ..	1925	23,577	Chile	1922	4,569
China	1916	22,232	Iraq	1924	4,433
Spain	1924	18,460	Tanganyika Territory(*a*)	1923	3,940
Uruguay	1924	14,443	Portugal	1920	3,851
Rumania	1925	12,950	Irish Free State ..	1925	2,813
Italy	1919	11,754	Canada	1925	2,756
Peru	1922	11,335	Kenya	1924	2,568
Turkey	1919	11,200	Poland	1921	2,193
France	1924	10,172	Basutoland ..	1924	2,002
Bulgaria	1920	8,923			
French Morocco ..	1924	8,215			

(*a*) Including goats.

6. **World's Totals.**—The number of sheep in the various great divisions of the world has been estimated by the International Institute of Agriculture, and a comparison has been made with pre-war estimates. In the table below the results are shown, the totals being subject to the limitations noted for other classes of live stock. (See § 2, 6 *ante.*)

SHEEP.—WORLD'S TOTALS, 1913 AND 1924.

Continents, etc.	Number at the date nearest—		Increase (+) or Decrease (−) in 1924.	
	1913.	1924.	Actual Figures.	Percentages.
	,000	,000	,000	
Europe	162,070	181,462	+19,392	+12.0
North and Central America	56,839	40,318	−16,521	−29.1
South America	98,578	77,405	−21,173	−21.5
Asia	59,702	54,769	− 4,933	− 8.3
Africa	73,489	73,509	+ 20	..
Oceania	109,330	117,756	+ 8,426	+ 7.7
Total	560,008	545,219	−14,789	− 2.6

The net decrease shown has been principally due to the decline in the numbers for America, the United States being mainly responsible for the falling off in North America, while in South America large reductions were recorded in Argentine, Brazil, and Uruguay. On the other hand, substantial increases were returned in the totals for Europe and Oceania.

7. Oversea Imports and Exports of Sheep.—As in the case of cattle, the oversea exports of live sheep from Australia are of comparatively small importance. During the past five years the principal consignments of ordinary sheep have been made to Malaya (British) from the State of Western Australia. The purchases by South African and Japanese buyers at the Australian Stud Sheep Sales during recent years have opened up a regular export trade with these two countries in stud sheep, the bulk of which has been secured from the leading flocks of New South Wales, Victoria and South Australia. The following are particulars of the imports and exports for the years 1920–21 to 1924–25 :—

SHEEP.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1920–21 . . .	3,038	8,828	22,345	149,803	19,307	140,975
1921–22 . .	345	4,836	36,456	41,757	36,111	36,921
1922–23 . .	235	3,378	38,194	45,395	37,959	42,017
1923–24 . .	1,021	8,487	31,323	49,374	30,302	40,887
1924–25 . .	2,183	10,902	6,326	40,695	4,143	29,793

8. Sheep Slaughtered.—The number of sheep slaughtered in the several States during each of the years from 1920 to 1924 was as follows :—

SHEEP (INCLUDING LAMBS) SLAUGHTERED, 1920 TO 1924.

Year.	N.S.W. (a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Nor. Ter.	Fed. Cap. Ter.(a)	Total.
1920 . .	3,847,498	4,244,798	461,449	a1,058,977	839,963	387,346	100	3,765	10,843,896
1921 . .	5,226,516	4,005,587	769,360	a1,208,347	871,831	362,871	30	3,333	12,447,875
1922 . .	5,662,953	5,863,195	762,540	a1,290,669	900,128	344,989		3,323	14,827,797
1923 . .	3,614,457	4,078,273	618,127	a956,140	809,379	316,438	. .	2,898	10,395,712
1924 . .	3,396,957	3,591,219	446,247	933,426	588,577	276,117	. .	2,989	9,235,532

(a) Year ended 30th June year following.

9. Production and Consumption of Mutton and Lamb.—The annual production of mutton and lamb during the three years ended 1924–25 averaged 459,431,744 lbs., of which 371,407,536 lbs., or 80.8 per cent., was consumed locally, leaving a balance of 19.2 per cent. for exportation. The consumption of mutton and lamb in Australia during the same period averaged 65 lbs. per head per annum, a figure considerably in excess of the per capita consumption during the past three years in the following countries :—United Kingdom, 27 lbs. ; Canada, 9 lbs. ; and United States of America, 5 lbs.

10. Exports of Mutton and Lamb Preserved by Cold Process.—The export trade in mutton and lamb preserved by cold process grew rapidly until in 1913, the year immediately before the war, the value of the shipments amounted to nearly £3,000,000. The exports fell away considerably during the war years, but a record shipment of 246,971,346 lbs., valued at £5,482,564, was made in 1919–20, and another large consignment was dispatched in 1922–23. Climatic conditions favoured a considerable output in the next two seasons, but shipments were small, owing chiefly to remarkably high values ruling for wool.

As in the case of frozen beef, the principal customer in this trade is the United Kingdom, which absorbed more than 94 per cent. of the total quantity exported from Australia during the last five years, while the balance was shipped mainly to Malaya (British), Egypt, Hong Kong, Ceylon, and Sweden.

MUTTON AND LAMB PRESERVED BY COLD PROCESS.—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Country to which Exported.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	Total for 5 years.
QUANTITY.						
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	47,792,058	88,631,613	162,653,301	35,996,594	46,025,699	381,099,265
Malaya (British) ..	1,228,087	1,089,985	1,106,778	846,641	1,072,104	5,343,595
Egypt	2,744,246	178,380	984,473	463,332	739,176	5,109,607
Hong Kong	410,329	391,166	432,250	491,660	446,076	2,171,481
Ceylon	398,214	396,880	340,484	415,729	443,937	1,995,244
Sweden	1,217,551	..	..	..	..	1,217,551
Philippine Islands ..	237,264	289,294	208,910	184,482	167,118	1,087,068
Canada	37,427	329,030	203,315	251,046	216,121	1,036,939
Union of South Africa ..	193,709	72,920	179,226	156,102	..	601,957
United States	124,535	..	..	..	..	124,535
Other Countries ..	510,401	335,731	1,503,824	999,763	1,161,231	4,510,950
Total	54,893,821	91,714,999	167,612,561	39,805,349	50,271,462	404,298,192
VALUE.						
	£	£	£	£	£	£
United Kingdom ..	1,393,179	2,073,276	4,205,189	1,067,571	1,397,291	10,136,506
Malaya (British) ..	36,980	24,750	28,531	25,067	34,548	149,876
Egypt	64,409	3,514	18,825	11,021	20,781	118,550
Hong Kong	12,352	8,690	12,104	14,969	14,144	62,259
Ceylon	11,784	7,781	8,872	12,296	14,018	54,751
Sweden	29,805	..	..	..	..	29,805
Philippine Islands ..	6,595	6,347	5,740	5,486	5,556	29,724
Canada	955	7,422	3,944	6,216	6,503	25,040
Union of South Africa ..	4,535	1,029	3,710	4,167	..	13,441
United States	4,684	..	..	..	..	4,684
Other Countries ..	13,380	6,806	35,002	24,057	29,241	108,486
Total	1,578,658	2,139,615	4,321,917	1,170,850	1,522,082	10,733,122

§ 5. Wool.

1. Importance of Wool Production.—Wool is the chief factor in the pastoral wealth of Australia, the value of the output for the season ended 30th June, 1925, being about £72,020,000. The bulk of the production is exported, but with the greater activity of Australian woollen mills the quantity used locally is increasing, nevertheless the amount so used represents approximately 7 per cent. only of the total clip.

2. Greasy and Scoured Wool.—For the purpose of comparing the clips as a whole for a series of years, it is convenient to have the total production expressed in terms of greasy wool.

The quantity of Australian wool scoured and washed before export during recent years has been on the average about 15 per cent. of the total quantity shipped. The loss of weight in scouring varies largely with season, locality, breed, and condition. It seems preferable to express " scoured and washed " wool in terms of " greasy " rather than vice versa, since the absolute error arising from uncertainty as to average loss of weight is thereby minimized.

In the tables dealing with production, " scoured and washed " wool has been converted into the estimated equivalent amount of " greasy " on the assumption that two pounds of " greasy " wool are on the average required to produce one pound of " scoured and washed."

3. Production.—(i) *Total.* The estimated production of wool in the several States, formerly based on the Customs returns, being no longer available from that source, an effort has been made to arrive at approximate figures from data collected by the State Statisticians from growers, fellmongers, etc. Particulars for years prior to 1920–21 will be found in earlier issues of the Year Book. The following table gives the estimates obtained for the five seasons ended 30th June, 1921 to 1925:—

WOOL.—TOTAL PRODUCTION, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales(*a*) ..	240,231,000	285,418,000	293,571,000	271,008,000	369,118,000
Victoria	90,250,571	103,512,777	102,467,950	82,513,361	106,787,897
Queensland.. ..	114,809,963	132,579,733	134,971,150	121,913,075	140,862,541
South Australia ..	48,953,503	54,038,262	54,929,801	57,598,083	58,663,608
Western Australia ..	43,714,630	46,301,039	44,139,138	48,055,393	43,307,052
Tasmania	9,503,048	9,634,624	10,218,550	9,712,273	10,483,452
Northern Territory(*b*)	40,000	30,000	20,000	20,000	20,000
Total ..	547,502,715	631,514,435	640,317,589	590,820,185	729,242,550

(*a*) Including Federal Capital Territory. (*b*) Approximate figures.

In connexion with the above figures compiled from growers' returns, a deficiency is apparent when comparisons are made with totals obtained from oversea shipments plus local consumption. Understatement by pastoralists has been the main cause of the shortage. Special inquiries prosecuted in the various States have located the nature and extent of the discrepancy, and the figures for 1924–25 are believed to be an accurate statement of the production for that year. Until further inquiries have been completed, it will not be possible to adjust the figures for earlier years, but it is estimated that the addition of 11¾ per cent. to the tables already published will give a very close approximation to the correct results.

(ii) *Weight and Value per Sheep Shorn.* The weight and value of wool per sheep shorn in the past five seasons are shown in the following table:—

WOOL.—WEIGHT AND VALUE PER SHEEP SHORN, 1920–21 TO 1924–25.

Season ended 30th June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
			WEIGHT.				
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1921	6.93	5.77	7.03	7.56	5.76	5.19	6.65
1922	7.49	6.23	7.57	7.70	6.19	5.77	7.18
1923	7.24	6.25	6.99	7.58	5.82	5.86	6.91
1924	7.14	6.08	6.66	8.37	6.42	5.58	6.86
1925	8.26	7.21	7.41	8.26	5.84	5.73	7.69
			VALUE.				
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1921	7 11	7 10	8 9	8 6	6 3	7 3	8 0
1922	8 1	6 11	8 11	7 8	6 5	6 8	7 10
1923	10 9	9 8	11 3	11 3	9 0	10 6	10 7
1924	14 3	13 1	13 3	15 4	12 4	13 5	13 9
1925	17 1	16 1	15 4	15 10	11 9	16 1	16 0

4. Care Needed in Comparing Clips.—In comparing successive clips, allowance must be made for the circumstance that, owing to climatic or other conditions, the time of shearing may be so far delayed that one clip may include almost thirteen months' growth of wool, while the succeeding one may include little more than eleven months' growth.

5. World's Wool Production.—The following table compiled by the Textile Division of the United States Department of Commerce shows the importance of Australia as a wool-producing country. Out of a total production of 2,906,579,000 lbs. in 1925, Australia's contribution amounted to 729,243,000 lbs., or more than 25 per cent. of the world's supply.

WOOL(*a*).—WORLD'S PRODUCTION, 1909 TO 1925.

Countries.	Average Annual Pre-War Production.(*b*)	Production	
		1924.	1925.(*c*)
North America—	lbs.	lbs.	lbs.
United States	314,110,000	286,205,000	301,060,000
Canada	11,210,000	15,112,000	15,924,000
Mexico	7,000,000	2,850,000	2,850,000
Total	332,320,000	304,167,000	319,834,000
Central America and West Indies	1,000,000	750,000	750,000
South America—			
Argentine Republic	358,688,000	280,000,000	275,000,000
Brazil	35,000,000	19,000,000	19,467,000
Chile	17,430,000	32,500,000	33,000,000
Peru	9,940,000	7,742,000	8,816,000
Falkland Islands	4,324,000	4,500,000	4,500,000
Uruguay	156,968,000	96,500,000	110,000,000
All other	5,000,000	5,000,000	5,000,000
Total	587,350,000	445,242,000	455,783,000
Europe—			
Austria	15,360,000	2,043,000	1,900,000
Belgium	1,060,000	850,000	840,000
Bulgaria	23,700,000	24,250,000	25,450,000
Czecho-Slovakia	..	3,970,000	4,210,000
Denmark	3,508,000	1,576,000	1,213,000
Estonia	..	1,782,000	1,782,000
Finland	..	5,000,000	5,000,000
France	80,688,000	43,413,000	44,312,000
Germany	52,000,000	53,000,000	53,000,000
Greece	14,000,000	19,810,000	18,000,000
Hungary	17,637,000	13,200,000	14,960,000
Iceland	1,980,000	2,205,000	1,530,000
Italy	55,000,000	57,000,000	57,000,000
Jugo-Slavia	25,446,000	27,662,000	28,000,000
Netherlands	3,556,000	5,842,000	5,842,000
Norway	8,160,000	5,512,000	5,600,000
Poland	7,100,000	4,480,000	4,500,000
Portugal	10,000,000	6,000,000	6,000,000
Rumania	13,228,000	52,910,000	54,940,000
Russia	320,000,000	(*d*)195,000,000	(*d*)195,000,000
Spain	72,000,000	81,400,000	81,400,000
Sweden	2,875,000	2,172,000	2,200,000
Switzerland	1,049,000	750,000	660,000
Turkey	28,000,000	..	..
United Kingdom	134,000,000	92,300,000	96,086,000
Irish Free State	..	14,000,000	13,668,000
All other	..	7,276,000	7,276,000
Total	890,347,000	723,403,000	730,369,000

(*a*) Computed on "greasy" basis. (*b*) Average for years 1909 to 1913 inclusive. (*c*) Where 1925 figures were not obtainable, an earlier figure or an unofficial estimate has been inserted. (*d*) Including Asiatic Russia.

WOOL(*a*).—WORLD'S PRODUCTION, 1909 TO 1925—*continued*.

Countries.	Average Annual Pre-War Production.(*b*)	Production.	
		1924	1925.(*c*)
	lbs.	lbs.	lbs.
Asia—			
British India	60,000,000	60,000,000	60,000,000
China	50,000,000	75,000,000	75,000,000
Persia	12,146,000	19,000,000	13,000,000
Russia in Asia	60,000,000	(*e*)	(*e*)
Turkey in Asia	90,000,000	60,000,000	60,000,000
All other	1,000,000	1,000,000	1,000,000
Total	273,146,000	215,000,000	209,000,000
Africa—			
Algeria	35,221,000	33,000,000	35,200,000
British South Africa	165,888,000	183,000,000	185,000,000
Tunis	3,735,000	4,400,000	4,400,000
Morocco	14,850,000	22,000,000	22,000,000
All other	30,000,000	30,000,000	30,000,000
Total	249,694,000	272,400,000	276,600,000
Oceania—			
Australia	700,193,000	590,820,000	729,243,000
New Zealand	198,474,000	188,000,000	170,000,000
Total	898,667,000	778,820,000	899,243,000
Total all other Countries	13,000,000	15,000,000	15,000,000
GRAND TOTAL	3,245,524,000	2,754,782,000	2,906,579,000

(*a*) Computed on "greasy" basis. (*b*) Average for years 1909 to 1913 inclusive. (*c*) Where 1925 figures were not obtainable, an earlier figure or an unofficial estimate has been inserted. (*e*) Included with European Russia.

6. **Wool Locally Used.**—The quantity of wool used in the woollen and tweed mills of the various States during the past five years was approximately as follows :—

WOOL.—GREASY, USED IN LOCAL WOOLLEN AND TWEED MILLS, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales	7,206,896	6,648,224	4,882,740	4,895.206	4,345,956
Victoria	12,799,593	13,293,011	15,926,225	13,068,648	14,420,497
Queensland	556,232	1,822,494	1,358,888	1,317,521	1,102,110
South Australia	683,779	608,098	621,265	586,800	536,870
Western Australia	..	..	..	..	..
Tasmania	1,129,722	1,043,706	1,502,060	963,369	1,931,814
Total	22,376,222	23,415,533	24,291,178	20,831,544	22,337,247

The total consumption of wool in Australia cannot be given, as particulars in respect of wool-combing and knitting establishments are not collected in all the States. An estimate, based upon the available particulars and the purchases made by manufacturers at local wool sales, places the figure in the vicinity of 50,000,000 lbs.

7. Exports of Wool.—(i) *Greasy—Quantities.* Prior to the war, about 31 per cent. of the exports of wool from Australia was dispatched to the United Kingdom, whereas the shipments for the same destination during the past five years have averaged more than 47 per cent. The other leading consignees during the latter period were France, Japan, Belgium, United States of America, Germany, and Italy, the principal continental countries taking 37 per cent., and America and Japan 15 per cent. of the total shipments. The following table shows for the years 1920–21 to 1924–25 the quantities of "greasy" wool exported, and the principal countries of destination :—

WOOL IN THE GREASE.—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Country to which Exported.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	283,583,260	337,775,993	259,230,707	163,169,820	175,937,327	1,219,697,107
France	32,484,058	136,751,611	137,742,458	121,268,001	114,676,170	542,922,298
Japan	9,856,174	50,775,592	50,043,561	45,455,153	53,015,265	209,145,745
United States of America	34,291,220	45,778,371	50,234,655	31,909,668	38,501,358	200,715,272
Belgium	26,021,710	55,690,271	34,180,045	48,011,894	36,682,734	200,586,654
Germany	8,715,299	39,830,067	32,940,661	31,422,309	39,595,031	152,503,367
Italy	15,975,186	39,629,626	28,646,259	25,143,698	28,752,441	138,147,210
Netherlands ..	884,634	636,378	3,017,462	14,091,947	2,977,389	21,607,810
Canada	362,915	1,619,372	1,184,321	697,794	483,127	4,347,529
India	381,516	613,701	296,164	1,598,944	770,543	3,660,868
Other Countries ..	5,344,064	1,619,731	807,697	1,196,811	875,712	9,844,015
Total ..	417,900,036	710,720,713	598,323,990	483,966,039	492,267,097	2,703,177,875

(ii) *Scoured and Washed—Quantities.* Similar particulars concerning the exports of "scoured and washed" wool were as follows :—

WOOL, SCOURED AND WASHED(*a*).—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Country to which Exported.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	43,100,738	65,815,973	75,505,841	24,664,470	27,181,826	236,268,848
France .. .	1,544,101	13,271,181	13,533,782	8,451,562	5,609,547	42,410,173
Belgium	10,648,048	16,153,469	3,938,725	3,749,960	3,179,143	37,669,345
Japan	3,719,499	5,051,529	6,435,286	5,010,121	3,462,119	23,678,554
United States of America	6,490,418	1,880,728	4,588,736	449,143	713,661	14,122,686
Germany	279,822	3,209,868	6,006,516	2,469,208	1,979,909	13,945,323
Italy	568,690	1,500,550	1,005,988	490,020	413,878	3,979,126
Canada	438,254	1,133,766	823,238	582,580	441,424	3,419,262
Netherlands ..	9,845	..	577,066	957,687	18,995	1,563,593
India	130,260	48,831	13,513	233,934	212,006	638,544
Other Countries ..	1,194,703	493,456	345,876	297,967	448,554	2,780,556
Total ..	68,124,378	108,559,351	112,774,567	47,356,652	43,661,062	380,476,010

(*a*) Including "tops."

The figures for "scoured and washed wool" include tops, amounting in 1920–21 to 6,598,681 lbs., valued at £2,049,588, in 1921–22, 6,200,505 lbs., valued at £1,207,048, in 1922–23, 6,374,922 lbs., valued at £1,412,683, in 1923–24, 4,988,258 lbs., valued at £1,161,920, and in 1924–25, 4,090,958 lbs., valued at £1,119,849. The total exports of wool tops during the last five years amounted to 28,253,324 lbs., valued at £6,951,088, of which 20,364,163 lbs., or more than 72 per cent., were shipped to Japan.

(iii) *Total Value of Exports.* The total value of the wool exported from Australia to the principal countries during the five years under review was :—

WOOL EXPORTS.—TOTAL VALUE, AUSTRALIA, 1920–21 TO 1924–25.

Country to which Exported.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	Total for 5 years.
	£	£	£	£	£	£
United Kingdom	21,889,438	23,013,128	25,901,608	20,136,750	24,386,464	115,327,388
France	1,357,358	6,842,265	10,408,195	12,278,938	12,484,097	43,370,853
Japan	2,107,473	4,438,672	6,095,616	6,212,881	7,479,586	26,334,228
United States of America	3,836,987	4,347,360	5,618,652	4,323,239	5,926,430	24,052,668
Belgium	2,380,519	3,784,065	2,514,717	4,951,127	3,844,335	17,474,763
Germany	364,196	2,404,833	3,448,031	3,576,436	4,929,589	14,723,085
Italy	1,164,280	2,667,081	2,498,733	2,634,990	3,327,166	12,292,250
Netherlands	46,348	44,388	347,698	1,625,493	367,651	2,431,578
Canada	79,588	245,421	184,365	154,323	162,395	826,092
India	45,198	50,243	11,487	123,550	108,522	339,000
Other Countries ..	509,375	139,787	109,662	179,431	246,910	1,185,165
Total	33,780,760	47,977,243	57,138,764	56,197,158	63,263,145	258,357,070

8. **Average Export Value.**—The average values per lb. of Australian greasy wool according to the export returns for the past five years have been as follows :—

AUSTRALIAN GREASY WOOL.—EXPORT VALUE PER LB., 1920–21 TO 1924–25.

Year	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	d.	*d.*	*d.*	*d.*	*d.*
Average value per lb.	14.53	13.16	18.38	24.14	27.10

9. **Exports and Local Sales of Wool, States, 1924–25.**—About 86 per cent. of the wool grown in Australia is normally sold in the local markets prior to export. Buyers from the United Kingdom, France, Belgium, Germany, and other European countries, also from America, Japan, China, and India, attend the sales conducted in Sydney, Melbourne, Geelong, Brisbane, Adelaide, Perth, Hobart, and Launceston.

The following table shows the number of bales of wool exported oversea from each State during the season ended 30th June, 1925, and the number sold for shipment, for use in local woollen mills, for scouring, etc. As considerable quantities of wool grown in some States are sold in or shipped from others, the figures consequently do not show actual local production, but total oversea shipments and sales.

WOOL.—EXPORTS AND LOCAL SALES, SEASON 1924–25.

State.	Oversea Exports.		Local Sales.(*a*)	
	Bales.	%	Bales.	%
New South Wales	715,303	42.19	653,200	41.14
Victoria	384,019	22.65	(*b*)382,743	24.11
Queensland..	307,202	18.12	267,641	16.86
South Australia	154,906	9.14	165,693	10.43
Western Australia	104,847	6.18	84,903	5.35
Tasmania	29,084	1.72	33,570	2.11
Total	1,695,361	100.00	1,587,750	100.00

(*a*) Including wool sold to local woollen mills, scourers, etc. (*b*) Including wool sold at Albury.

10. **Exports and Local Sales of Wool, Australia, 1895 to 1925.**—The number of bales of wool exported from Australia, and the number sold at local sales prior to shipment, or taken for local use from 1895 onwards are shown in the following table :—

WOOL.—EXPORTS AND LOCAL SALES, AUSTRALIA, 1895 TO 1925.

Year ended 30th June.	Overseas Exports.	Local Sales.(*a*)	Ratio of Wool sold locally to Exports.
	Bales.	Bales.	%
1895	1,595,652	817,333	51.22
1900	1,221,163	807,031	66.09
1905	1,218,969	926,940	76.04
1910	1,921,705	1,624,561	84.54
1911	1,975,378	1,642,555	83.15
1912	2,020,547	1,700,494	84.16
1913	1,718,486	1,518,650	88.37
1914	1,966,576	1,703,744	86.64
1922	2,579,484	2,226,758	86.33
1923	2,315,255	1,932,315	83.46
1924	1,708,938	1,698,141	99.37
1925	1,695,361	1,587,750	93.65

(*a*) Including wool absorbed by local woollen mills and wool-scouring establishments.

The steady development of the Australian wool market is clearly shown in this table. In the nineteen years ended 1914, the quantity sold locally more than doubled, and the ratio of wool sold locally to that exported increased from 51 per cent. in 1895 to over 86½ per cent. in the season ended 30th June, 1914. Particulars for the years 1915 to 1921 are not comparable owing to the abnormal conditions arising from the war, but the figures for the two selling seasons ended 30th June, 1923, indicate a return to normal, especially when allowance is made for the shipment of " Bawra " wool already appraised in previous seasons. The unusually high percentage of wool sold before shipment in 1924 was largely accounted for by the excellent selling conditions in Australia, and a similar condition of affairs in 1925 can be traced to the collapse of the wool market during the latter part of the season and the consequent withdrawal of 500,000 bales of wool from sale. The ratio of sales to shipments is, of course, somewhat vitiated by the overlapping of the respective seasons, and the inclusion in the sales of wool for local consumption.

11. **Quantities of Various Descriptions of Wool Sold in Each State.**—The quantities and ratios of the various descriptions of wool marketed in each State are given in the following table :—

WOOL.—LOCAL SALES, DESCRIPTIONS, 1924–25.

Description of Wool.	N.S.W.	Victoria. (*a*)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.
Greasy	621,698	380,731	241,270	164,396	83,845	33,550	1,525,490
Scoured ..	31,502	2,012	26,371	1,297	1,058	20	62,260
Total ..	653,200	382,743	267,641	165,693	84,903	33,570	1,587,750
Fleeces, etc. ..	618,646	356,460	257,184	154,050	77,917	32,309	1,496,566
Lambs ..	34,554	26,283	10,457	11,643	6,986	1,261	91,184
Total ..	653,200	382,743	267,641	165,693	84,903	33,570	1,587,750
Merino	561,033	218,753	266,005	159,941	81,412	6,988	1,294,132
Crossbred and all strong breeds ..	92,167	163,990	1,636	5,752	3,491	26,582	293,618
Total ..	653,200	382,743	267,641	165,693	84,903	33,570	1,587,750

(*a*) Including wool sold at Albury.

WOOL.—LOCAL SALES, DESCRIPTIONS, 1924–25—*continued.*

Description of Wool.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	%	%	%	%	%	%	%
Greasy	95.18	99.47	90.14	99.22	98.75	99.94	96.07
Scoured ..	4.82	0.53	9.86	0.78	1.25	0.06	3.93
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Fleece, etc. ..	94.71	93.13	96.09	92.97	91.77	96.24	94.26
Lambs'	5.29	6.87	3.91	7.03	8.23	3.76	5.74
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Merino	85.89	57.15	99.39	96.53	95.89	20.82	81.51
Crossbred and all strong breeds ..	14.11	42.85	0.61	3.47	4.11	79.18	18.49
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(*a*) Including wool sold at Albury.

A very large proportion of the wool clip is marketed in the greasy state. Buyers still show a decided preference for wool in the grease, and the proportion of such wool sold during the 1924–25 season amounted to over 96 per cent. Of fleece and lambs' wool, the former represented 94.26, and the latter 5.74 per cent. The class of wool produced is largely merino, which is almost exclusively grown in the northern, western, and central parts of the continent, the bulk of the merino wool dealt with in Victoria coming from Riverina and other parts of New South Wales. The development of the frozen mutton and lamb export trade and the resultant raising of a type of sheep suitable for both mutton and wool led to a considerable increase in the production of crossbred wool throughout Australia during recent years. The percentage of such wool sold on the total sales amounted to 18.6 per cent. in 1912, whereas, eight years later, in 1919–20, it had increased to 33.9 per cent. The accumulation of large stocks of coarse wools after the war and the consequent slump in prices induced many flock-masters to return to merino, and the percentage thereof sold in the local market increased from 66.11 in 1919–20 to 81.51 in 1924–25, while crossbred declined from 33.89 to 18.49 per cent. during the same period. The requirements of the frozen mutton and lamb trade, and the advance of closer settlement with its preference for crossbred sheep-raising in conjunction with wheat-growing or mixed farming, will compel the maintenance of the crossbred flocks; still, the prevailing demand for fine wool at remunerative rates must influence the Australian flockmasters to concentrate in the future on the production of merino wool and its close counterparts comeback and fine crossbred.

12. **Percentages of Various Descriptions of Wool Sold in each State.**—The following table gives the percentage of each description of wool sold in the several States on the total sold in Australia during the season 1924–25 :—

WOOL.—LOCAL SALES, PERCENTAGES OF DESCRIPTIONS, 1924–25.

Description of Wool.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	%	%	%	%	%	%	%
Greasy	40.75	24.96	15.81	10.78	5.50	2.20	100.00
Scoured ..	50.60	3.23	42.36	2.08	1.70	0.03	100.00
Fleece, etc. ..	41.34	23.82	17.18	10.29	5.21	2.16	100.00
Lambs'	37.89	28.83	11.47	12.77	7.66	1.38	100.00
Merino	43.35	16.90	20.56	12.36	6.29	0.54	100.00
Crossbred and all strong breeds ..	31.39	55.85	0.56	1.96	1.19	9.05	100.00

The bulk of the crossbred wool in Australia is grown in Victoria and the southern parts of New South Wales; Tasmania, where crossbred sheep largely predominate, coming next in order, followed by small consignments from South Australia and Western Australia. In Victoria and New South Wales a noticeable feature of the past four seasons has been a general fining-up of the medium and coarse crossbreds by the use of merino and Corriedale rams. Australian pastures and climate are naturally more adapted for the growth of a larger proportion of fine crossbred wool than the River Plate, South Africa, and other wool-growing countries, and it is probable that this process of refinement will tend towards the abandonment of coarse wool-growing in Australia.

13. The Wool Market.—(i) *The* 1924–25 *Season.* The 1924–25 wool-selling season was distinguished by a remarkable advance in values, followed by an equally remarkable decline. The price level established during the previous season was a record one, but when the new season opened it was thought that the increase in the volume of production would compel some concession in values, and misgivings were expressed regarding the effective financing of the clip. With the advance of the season, however, prices began to soar until they eclipsed all previous records. Confidence prevailed, and the sales were exceptionally keen. After the Christmas recess, however, prices began to recede, confidence was undermined, and a position was reached when the demand was insufficient to maintain normal sales. The selling programme was promptly revised and remodelled and the sales continued, but the position became so unsatisfactory that they had to be suspended, and arrangements were made for the carry over of a quarter of the clip to the following season. Experts find it difficult to account for the remarkable fall in values, but the view is generally held that the high prices of the raw material, coupled with the inflated cost of clothing, adversely affected the demand.

The 1924–25 clip was well grown, of good length and body, with softness of handle. Owing to the abundant season, the fibre was not so fine in quality as usual, but the yield per sheep was heavy, and altogether the clip was one of the best on record.

During the year, the wool sold in Australia totalled 1,587,750 bales, and though this quantity represented a decrease of 110,391 bales on the previous season's record sales, there was an increase in the amount realized of no less than £2,240,464, the returns aggregating a value of £55,545,838 as compared with £53,305,374 in the previous year. The average price per bale was £34 19s. 8d., which, considering that it included every description of wool, is a remarkable figure, and constitutes an absolute record for the Australian sales.

The prices realized in the past season were in every instance except two, viz., merino locks and scoured crossbred fleece, the highest recorded in the Australian market. In the case of greasy merino fleece the season's record of 53¼d. was 6¾d. above the record of the previous season, and 3¾d. above the previous Australian record obtained in 1920–21 when 49½d. was reached for a consignment of Ware wool. The past season record of 53¼d. was secured for a parcel of the well-known Plains wool disposed of in the Geelong market, a centre which invariably secures the premier position at Australian wool sales. The Geelong market again excelled in highest prices, securing no less than nine records, while Brisbane obtained three, Melbourne two, and Sydney one. The highest prices for the past nine seasons for wools sold at auction, or fixed by appraisement at selling centres in Australia, are as follows :—

RECORD PRICES OBTAINED FOR WOOL IN AUSTRALIAN MARKETS, 1916–17 TO 1924–25.

Description.	Price.	Brand.	Bales.	Selling Centre.	Season.
	d.				
Greasy Merino :					
Fleece ..	53¼	Plains	4	Geelong ..	1924–25
Broken	45¾	R/Carngham	34	Geelong ..	1924–25
Pieces ..	43½	Ware (conj.)	11	Geelong ..	1924–25
Bellies ..	40¼	Langi/Kal Kal ..	12	Geelong ..	1924–25
Locks ..	22½	T/Binda	1	Sydney ..	1923–24
		Wattle Grove/M ..	6	Geelong ..	1923–24
		V (reversed) over W/Penlan Downs (in ½ circle)	5	Brisbane ..	1923–24
Lambs' ..	48½	Ware (conj.)	1	Geelong ..	1924–25
Greasy comeback :					
Fleece ..	50½	WTA/Boorook ..	8	Geelong ..	1924–25
Lambs ..	41½	North Station ..	8	Geelong ..	1924–25
Greasy crossbred :					
Fleece ..	43½	Mondilibi	4	Geelong ..	1924–25
		GR	25	Geelong ..	1924–25
		Barton	6	Tasmania ..	1924–25
Lambs ..	37	JM/Tabletop ..	3	Melbourne ..	1924–25
Scoured merino :					
Fleece ..	70½	AS in centre of double triangle, B/Tarbrax	63	Brisbane ..	1924–25
Pieces ..	63	Inisfail Downs/BB ..	18	Brisbane ..	1924–25
Lambs ..	59½	Garomna	4	Brisbane ..	1924–25
Scoured crossbred :					
Fleece ..	52	Tomslake	9	Sydney ..	1923–24

Although 49½d. represents the highest price received for Australian greasy wool at recent Australian sales, the record price, according to "Dalgety's Annual Wool Review," for such wool in modern times was 109d. secured in London for the Geelong wool "NC" in February, 1920, while a line of scoured wool sold at London in March, 1920, realized 136d. per lb. In the early days John Macarthur sold wool at 126d. per lb., and in 1827 the "Sydney Gazette" contained an authentic record of Macarthur having secured 196d. per lb. for a single bale of the historic "J M'A" brand, sold at Garraway's Coffee House, Cornhill, London. Macarthur therefore not only played an important part in the founding of Australia's staple industry, but established a record that is still unbeaten.

(ii) *Wool Realization Scheme.* The British Australian Wool Realization Association Ltd. ("Bawra") was formed on the 27th January, 1921, for the purpose of selling in conjunction with the existing clip 50 per cent. of the Australian carry-over wool acquired by the Association on account of the Australian growers; also to dispose of, as agents, all carry-over wools owned by the British Government and consisting of New Zealand, Falkland Islands, South African and 50 per cent. of Australian wool as promptly and to the best advantage as market conditions would permit, while at the same time contributing to stabilize the wool market which had become demoralized on the return to free wool sales. Towards the end of the year 1921, 80,550 bales of South African wool owned by the British Government were handed over to the Association for disposal under the Agency Agreement.

The marketing of B.A.W.R.A. wools was successfully carried out at various centres in England and on the Continent, and the concluding auction sale took place at Liverpool on 2nd May, 1924, when the last bale of wool carried over from the Imperial Wool Purchase Scheme was disposed of. The whole of the wool controlled by B.A.W.R.A. amounting to 2,691,756 bales was sold in three and a half years, and passed into consumption together with the current clips of the wool-growing countries.

14. **United Kingdom Importation of Wool.**—The appended statement of the quantity and value of wool imported into the United Kingdom during the year 1924 from the principal wool-producing countries shows the important position which Australia occupies in the supply of wool to the mother country :—

WOOL(*a*).—IMPORTS, UNITED KINGDOM, 1924.

Country from which imported.	Quantity.	Value.	Country from which Imported.	Quantity.	Value.
	lbs.	£		lbs.	£
Australia ..	252,171,300	26,516,832	Irish Free State	14,878,900	905,101
New Zealand ..	210,051,100	15,473,147	Belgium ..	6,950,700	613,830
Union of South Africa ..	133,373,000	9,816,285	Peru	5,426,300	345,677
Argentine Republic ..	56,248,900	4,309,541	Falkland Islands	3,327,000	296,325
India ..	61,179,600	3,151,698	Other British Possessions ..	5,911,100	362,298
Chile ..	29,668,000	2,594,688	Other Countries	17,725,300	1,032,315
France ..	26,794,500	2,409,967			
United States of America ..	18,135,900	1,699,927			
Uruguay ..	14,051,500	1,395,016			
			Total ..	855,893,100	70,922,647

(*a*) Greasy, Scoured, and Tops.

Of the importations of wool into the United Kingdom, Australian wool represented 29 per cent. of quantity and 37 per cent. of value, and New Zealand 25 per cent. of quantity and 22 per cent. of value. It is interesting to note that 680,892,000 lbs., valued at £56,521,686, were received from British Possessions, being 80 per cent. of both the total weight and value imported.

§ 6. Trade in Hides and Sheepskins.

1. **Extent of Trade.**—In addition to the hides and sheepskins treated in the tanneries of the several States, a very considerable export trade is carried on, the value of cattle hides, calfskins, and sheepskins exported from Australia during the five years 1920–21 to 1924–25 amounting to £16,627,076, or an average of £3,325.415 per annum.

2. **Sheepskins with Wool.**—By far the largest item included in the amount mentioned in the preceding sub-section arises from the value of sheepskins with wool—the exports of which during the five years aggregated £12,383,679. The largest purchaser of sheepskins with wool is the United Kingdom, to which nearly 48 per cent. of the consignments was dispatched during the last five years. France ranked next in order of importance with 38 per cent., while the remaining 14 per cent. was shipped principally to Belgium and the United States of America. The exports of sheepskins with wool during each of the years from 1920–21 to 1924–25 were as follows :—

SHEEPSKINS WITH WOOL.—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	Total for 5 years.
Sheepskins (with wool) .. No.	4,478,853	7,270,660	9,610,335	7,063,988	6,245,268	34,669,104
Value .. .. £	1,155,643	1,346,582	2,948,489	3,111,128	3,821,837	12,383,679

3. **Sheepskins without Wool.**—In the case of sheepskins without wool the principal countries of consignment are the United States of America and the United Kingdom. These two countries were responsible for nearly 88 per cent. of the exports during the past five years, the purchases of the United States of America alone amounting to 51 per cent. of the total shipments. Particulars concerning exports are as follows :—

SHEEPSKINS WITHOUT WOOL.—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	Total for 5 years.
Sheepskins (without wool) .. No.	704,296	116,553	1,150,739	599,866	64,425	2,635,879
Value .. .. £	86,663	6,880	78,630	50,655	7,139	229,967

4. **Hides.**—(i) *Exports.* The export of Australian cattle hides, which fell away during the war years, is again assuming importance, and marked increases have taken place during the past four years. The trade was mainly with the United Kingdom, Italy, and Germany, which countries took respectively 37, 18, and 14 per cent. of the total quantity exported during the past five years. United States of America and Belgium with shipments amounting to 444,467 and 188,483 respectively were the next largest purchasers.

Particulars concerning the export of cattle hides during the past five years are as follows :—

CATTLE HIDES.—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	Total for 5 years.
Cattle Hides .. No.	261,938	446,199	651,888	924,092	1,167,938	3,452,055
Value .. .. £	375,412	530,355	773,691	817,719	1,322,088	3,819,265

The calfskins exported during the years 1920–21 to 1924–25 numbered 628,218, valued at £190,610, shipped mainly to the United States of America, the value of the skins taken by that country averaging 79 per cent. of the total exports during the past five years. The annual export of horse hides is very small, and averaged only 1,046 hides, valued at £711.

(ii) *Imports.* The import trade in cattle hides and calfskins is expanding, the number annually imported on the average during the past five years amounting to 475,428. New Zealand supplies the great bulk of these importations, and shipments of limited quantities are also obtained from the Pacific Islands, France, and Italy. The number and value of cattle hides, including calfskins, imported into Australia during the five years 1920–21 to 1924–25 are as follows :—

CATTLE HIDES.—IMPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	Total for 5 years.
Cattle Hides .. No.	313,442	451,373	675,471	480,265	456,589	2,377,140
Value .. .. £	500,460	433,014	541,079	533,539	494,501	2,502,593

The number of horse hides imported into Australia is unimportant. Imports during the last five years numbered 22,625, valued at £23,458.

CHAPTER XVII.

AGRICULTURAL PRODUCTION.

Note.—Except where otherwise stated, the "agricultural" years hereafter mentioned are taken as ending on 30th June.

§ 1. Introductory.

1. **Early Attempts at Agriculture.**—The instructions issued to Captain Phillip on the 25th April, 1787, directed him, amongst other things, to proceed as soon as possible to the cultivation of the soil " under such regulations as may appear to be necessary and best calculated for securing supplies of grain and provisions." When the settlers landed at Botany Bay, however, it was found that the glowing accounts published in England by members of Captain Cook's expedition of the fertility of the soil in that locality were considerably overdrawn. Even when Phillip and his company moved round to Port Jackson on the 26th January, 1788, matters were for a time in no better case. The ground in the immediate neighbourhood of the settlement was not suitable for the cultivation of cereal crops, and when the time came to cultivate the soil it was found that there were very few who possessed the slightest acquaintance with the art of husbandry.

2. **The First Sowing.**—In his dispatch of the 15th May, 1788, Captain Phillip states that it was proposed to sow 8 acres with wheat and barley, although, owing to the depredations of field mice and ants, he was doubtful of the success of the crops.

3. **Discovery of Suitable Agricultural Land.**—A branch settlement was formed at Rosehill, on the Parramatta River, towards the close of 1788, and here grain crops were successfully raised. In his despatch of 12th February, 1790, Phillip refers to the harvest at Rosehill, at the end of December 1789, as consisting of 200 bushels of wheat and 60 of barley, in addition to small quantities of oats, Indian corn, and flax. By the year 1791 there were 213 acres under crop in this locality. In 1792 a new settlement was formed at Toongabbie, about 3 miles westward of Parramatta, where Phillip states " there are several thousand acres of exceeding good ground." The Hawkesbury Valley, which probably contains some of the richest land in the world, was first settled in 1794. For a long time agricultural operations in Australia were restricted to the narrow belt of country between the tableland and the east coast of New South Wales, as it was not until the year 1813 that a passage was discovered across the Blue Mountains to the fertile plains of the west.

§ 2. Progress of Agriculture.

1. **Early Records.**—In an " Account of Live Stock and Ground under Crop in New South Wales, 19th August, 1797," Governor Hunter gives the acreage under crop as follows :—Wheat, 3,361 acres ; maize, 1,527 acres ; barley, 26 acres ; potatoes, 11 acres ; and vines, 8 acres.

At a muster taken in 1808 the following was the return of crops :—Wheat, 6,874 acres ; maize, 3,389 acres ; barley, 544 acres ; oats, 92 acres ; peas and beans, 100 acres ; potatoes, 301 acres ; turnips, 13 acres ; orchards, 546 acres ; and flax and hemp, 37 acres.

By the year 1850 the area under crop had increased to 491,000 acres, of which 198,000 acres were cultivated in what is now the State of New South Wales, and 169,000 acres in Tasmania. At the end of 1850 the area under cultivation in Victoria, which was then the Port Phillip District of New South Wales, was 52,190 acres.

The gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area under crop declining from 491,000 acres in 1850 to 458,000 acres in 1854; the area under cultivation in New South Wales decreased by nearly 66,000 acres, while in Tasmania a falling off of over 41,000 acres was experienced. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia totalled over a million acres. The largest increase took place in Victoria, which returned an area of 299,000 acres. For the same year South Australia had 264,000 acres in cultivation, Tasmania 229,000 acres, and New South Wales 223,000 acres.

2. **Progress of Cultivation.**—(i) *General.* The following table shows the area under crop in each of the States and Territories of Australia at decennial intervals since 1860, and during each of the last five seasons. The area under permanent artificially-sown grasses is excluded in all the States, except for the years 1860 to 1879 in the case of New South Wales, where the acreage cannot be separated. During those years, however, the area laid down under permanent grasses could not have been very large.

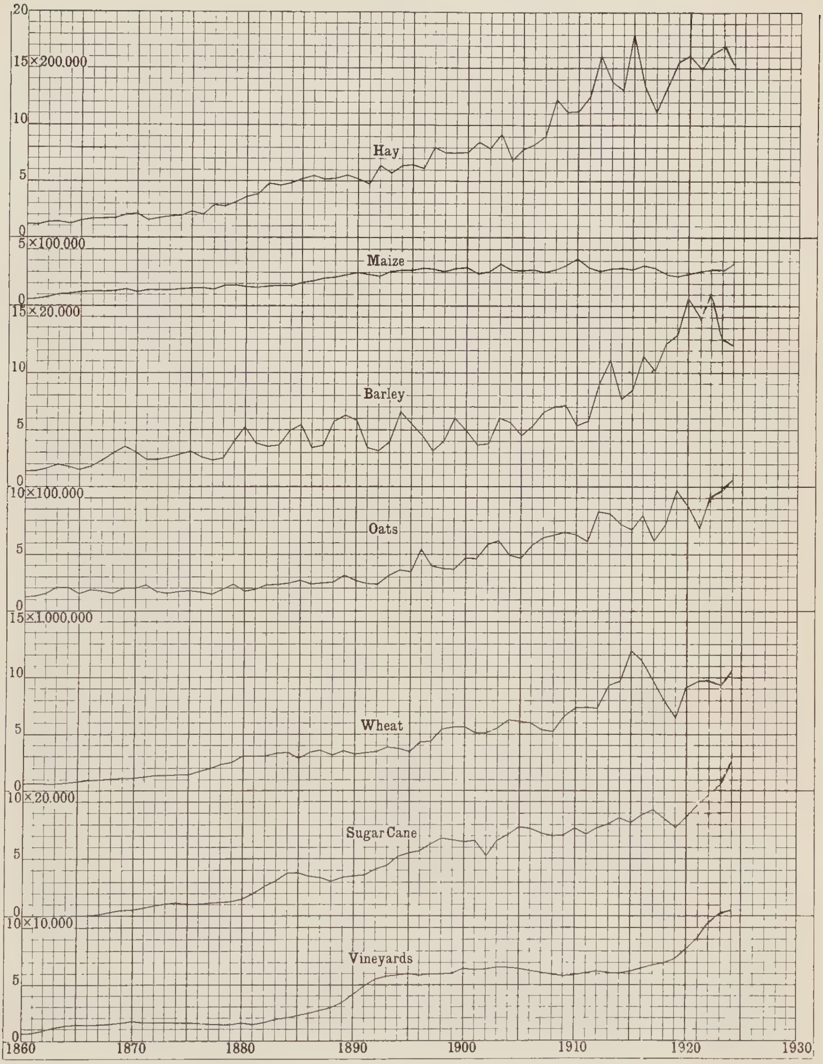
AREA UNDER CROP, 1860 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1860–1	260,798	387,282	3,353	359,284	24,705	152,860	..	..	1,188,282
1870–1	426,976	692,840	52,210	801,571	54,527	157,410	..	..	2,185,534
1880–1	629,180	1,548,809	113,978	2,087,237	57,707	140,788	..	..	4,577,699
1890–1	852,704	2,031,955	224,993	2,093,515	69,678	157,376	..	..	5.430,221
1900–1	2,445,564	3,114,132	457,397	2,369,680	201,338	224,352	..	..	8,812,463
1910–11	3,386,017	3,952,070	667,113	2,746,334	855,024	286,920	360	..	11,893,838
1920–21	4,465,143	4,489,503	779,497	3,231,083	1,804,987	297,383	296	1,966	15,069,858
1921–22	4,445,828	4,530,312	804,507	3,378,764	1,901,680	293,708	283	1,942	15,357,024
1922–23	4,694,287	4,862,548	863,755	3,575,452	2,274,998	298,611	427	2,172	16,572,250
1923–24	4,809,591	4,682,144	871,968	3,562,551	2,323,070	279,122	440	2,300	16,531,186
1924–25	4,912,124	4,761,394	1,069,837	3,557,405	2,710,856	263,872	342	2,361	17,278,191

The progress of agriculture was uninterrupted from 1860 onwards, reaching its maximum in 1915–16, when 18,528,234 acres were cultivated. Following that year, the decline in wheat-growing and the effects of the drought of 1918–19 reduced the acreage to 13,296,407 acres in 1919–20, a decrease of 5,231,827 acres in the space of four years. The obstacles to the disposal of the wheat crop having been removed, the area began to expand in 1920–21, and during the last five seasons the total acreage under cultivation increased by 4,000,000 acres. Wheat continues to be the most extensively-grown crop in Australia, the area thereunder for both grain and hay during 1924–25 amounting to nearly 69 per cent. of the total acreage under cultivation. The extension of the wheat area since 1919–20, despite intermittent adverse climatic and market conditions, is a happy augury for the continuance of agricultural development in Australia. The maximum area cultivated in 1915–16, viz., 18,528,234 acres, was the result of a special war effort, and the results obtained far exceeded those for any previous year.

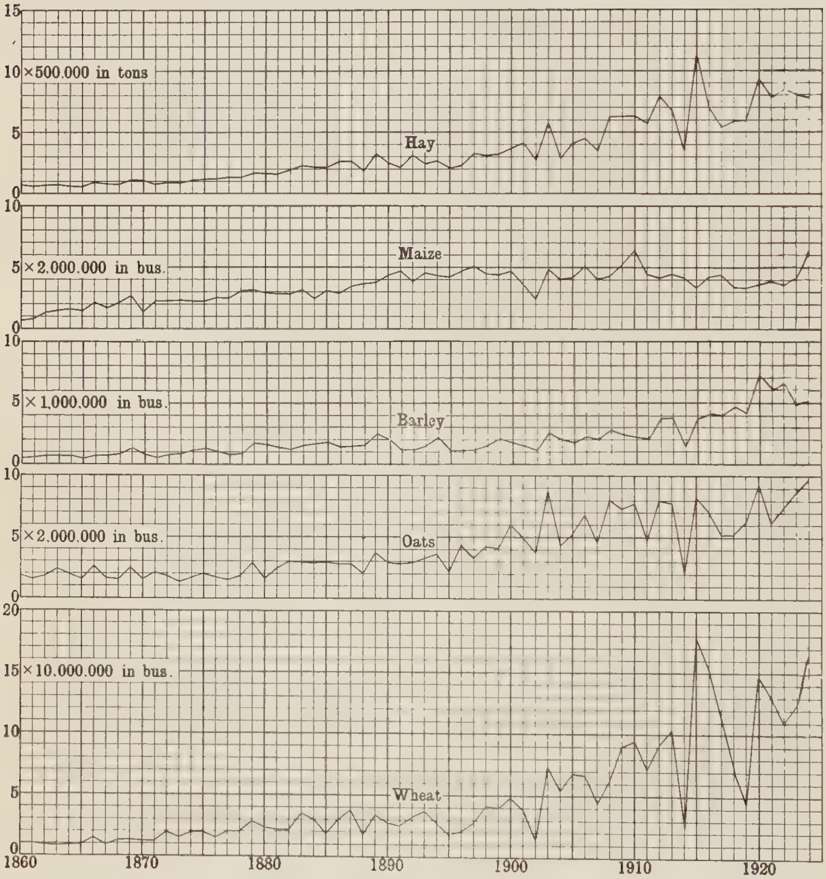
(ii) *Relation to Population.* The total area under cultivation per head of population reached its lowest point in recent years during 1919–20, but since that year the

AREA UNDER PRINCIPAL CROPS—AUSTRALIA, 1860 TO 1924–25.



EXPLANATION.—The base of each small square represents an interval of one year, while the vertical height represents a number of acres, varying with the nature of the crop in accordance with the scale given on the left of the graph. The height of each curve above its base line denotes for the crop to which it relates, the total area under cultivation in Australia during the successive seasons.

PRODUCTION OF PRINCIPAL CROPS—AUSTRALIA, 1860 TO 1924–25.



EXPLANATION.—A separate base line is provided for each of the crops dealt with. In each instance the base of a small square represents an interval of one year, the vertical height of such square representing in the case of wheat, 10,000,000 bushels; oats, 2,000,000 bushels; barley, 1,000,000 bushels; maize, 2,000,000 bushels; and hay, 500.000 tons. The height of each curve above its base line denotes the aggregate yield in Australia of the particular crop during the successive seasons.

total has increased at a much faster rate than the population. Details for the past five seasons are as follows :—

AREA UNDER CROP PER 1,000 OF POPULATION, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21 ..	2,135	2,938	1,036	6,578	5,456	1,397	74	997	2,784
1921–22 ..	2,089	2,921	1,045	6,723	5,674	1,345	76	941	2,787
1922–23 ..	2,160	3,058	1,096	6,968	6,621	1,364	120	849	2,942
1923–24 ..	2,177	2,881	1,075	6,789	6,566	1,274	124	877	2,875
1924–25 ..	2,179	2,873	1,281	6,606	7,444	1,211	95	788	2,942

(iii) *Relation to Total Area.* The next table furnishes a comparison of the area under crop in the several States and Territories and Australia with the respective total areas. For Australia as a whole, the area under crop in 1924–25 represented only about 1 acre in every 111. In Victoria the proportion was about 1 acre in every 12, in New South Wales 1 in 40, in Tasmania 1 in 64, in South Australia 1 in 68, in Western Australia 1 in 230, in Queensland 1 in 402, in the Federal Territory 1 in 255, and in the Northern Territory about 1 in 980,000.

PERCENTAGE OF AREA UNDER CROP ON TOTAL AREA, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	%	%	%	%	%	%	%	%	%
1920–21 ..	2.255	7.982	0.182	1.328	0.289	1.772	..	0.327	0.792
1921–22 ..	2.245	8.054	0.187	1.389	0.304	1.751	..	0.323	0.807
1922–23 ..	2.370	8.645	0.201	1.470	0.364	1.780	..	0.361	0.871
1923–24 ..	2.429	8.324	0.203	1.465	0.372	1.664	..	0.382	0.868
1924–25 ..	2.480	8.465	0.249	1.462	0.434	1.573	..	0.392	0.908

In the Northern Territory the proportion which the area under crop bears to the total area is, at present, practically negligible.

3. **Artificially-sown Grasses.**—In all the States there are considerable areas under artificially-sown grasses mainly sown on uncultivated land after burning off the existing vegetation, and not included in "area under crops." Statistics regarding the areas under such grasses are as shown hereunder :—

AREA UNDER SOWN GRASSES, 1920–21 TO 1924–25.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21	1,816,104	1,051,290	450,780	14,805	17,265	660,000	500	71	4,010,815
1921–22	2,005,444	1,032,104	459,914	20,890	18,441	781,000	550	71	4,318,414
1922–23	1,925,432	957,454	475,226	22,278	25,377	857,581	510	18	4,263,876
1923–24	1,930,894	1,024,591	498,552	30,800	38,022	799,443	500	18	4,322,820
1924–25	1,993,694	944,339	538,165	64,212	60,257	866,331	500	24	4,467,522

The increase in the area of the grass lands of Australia during recent years is due in large measure to the development of the dairying industry referred to in the next chapter.

§ 3. Relative Importance of Crops.

1. Distribution of Crops.—The following table gives the areas in the several States under each of the principal crops for the season 1924–25 :—

DISTRIBUTION OF CROPS, 1924–25.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acre.	Acres.	Acres.
Wheat	3,549,367	2,705,323	189,145	2,499,852	1,867,614	12,954	..	711	10,824,966
Oats	122,994	517,229	4,010	155,214	318,982	46,175	..	523	1,165,127
Maize ..	146,564	23,126	229,160	7	71	..	21	..	398,949
Barley—									
Malting ..	4,191	42,217	6,268	150,584	5,914	2,587	..	..	211,761
Other ..	2,447	21,547	2,530	15,848	5,692	423	..	..	48,487
Beans and Peas	..	12,787	143	9,498	2,224	23,243	..	..	47,895
Rye	2,373	1,029	65	180	441	249	..	..	4,337
Other Cereals ..	153	..	..	..	47	..	..	..	200
Hay	762,242	1,120,312	95,007	562,253	397,591	87,945	10	1,045	3,026,405
Green Forage ..	166,030	99,531	134,109	73,023	78,586	13,602	..	43	564,924
Grass and other Seeds ..	51	1,644	7,198	681	..	734	..	..	10,308
Orchards and other Fruit Gardens ..	73,972	85,358	31,738	33,319	18,520	33,992	..	5	276,904
Vines—									
Productive ..	10,954	31,723	1,137	43,361	4,139	..	..	..	91,314
Unproductive	3,783	10,744	442	6,919	1,192	..	..	..	23,080
Market Gardens	8,824	14,620	1,619	1,577	2,913	576	..	13	30,142
Sugar Cane—									
Productive ..	7,761	..	167,649	..	..	..	..	..	175,410
Unproductive	12,232	..	85,870	..	..	..	..	..	98,102
Potatoes ..	23,384	61,295	9,493	3,292	5,122	36,171	..	19	138,776
Onions ..	150	4,504	194	328	65	12	..	..	5,253
Other Root Crops	1,078	2,871	2,333	422	284	3,510	20	..	10,518
Tobacco ..	719	1,228	166	36	..	..	..	..	2,149
Broom Millet ..	1,301	531	554	..	..	..	..	..	2,386
Pumpkins and Melons ..	3,660	1,691	13,020	227	632	..	..	2	19,232
Hops	..	269	..	2	..	1,535	..	..	1,806
Cotton—									
Productive ..	86	..	50,186	..	69	..	80	..	50,421
Unproductive	..	..	31,988	..	..	..	..	..	31,988
All other Crops	7,808	1,815	5,813	782	758	164	211	..	17,351
Total Area ..	4,912,124	4,761,394	1,069,837	3,557,405	2,710,856	263,872	342	2,361	17,278,191

2. Relative Areas of Crops in States and Territories.—Taking the principal crops, i.e., those in the case of which the cultivation in Australia amounts to more than 50,000 acres, the proportion of each in the various States and Territories to the total area under crop for the season 1924–25 is shown in the next table. In four of the States, viz., New South Wales, Victoria, South Australia, and Western Australia, wheat-growing for grain is by far the most extensive form of cultivation, while in the same States the hay crop is second in importance. In Victoria and Western Australia, the oat crop occupies third position, while green forage ranks third in New South Wales, and barley in South Australia. In Queensland, the principal crops in the order of importance are sugar cane, maize, wheat and green forage, while in Tasmania, hay, oats, potatoes, and orchards and fruit gardens occupy the leading positions.

As pointed out previously, wheat is the main crop in Australia, the area thereunder for grain and hay representing in 1924–25 nearly 69 per cent. of the total area under cultivation.

RELATIVE AREAS UNDER CROP, 1924–25.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	%	%	%	%	%	%	%	%	%
Wheat ..	72.26	56.82	17.68	70.27	68.89	4.91	..	30.12	62.65
Hay ..	15.52	23.53	8.88	15.81	14.67	33.33	2.92	44.26	17.52
Oats ..	2.50	10.86	0.37	4.36	11.77	17.50	..	22.15	6.74
Green Forage ..	3.38	2.09	12.53	2.05	2.90	5.15	..	1.82	3.27
Maize ..	2.98	0.49	21.42	0.00	0.00	..	6.14	..	2.31
Barley ..	0.13	1.34	0.82	4.68	0.43	1.14	..	..	1.51
Orchards and Fruit Gardens..	1.51	1.79	2.97	0.94	0.68	12.88	..	0.21	1.60
Sugar-cane	0.41	..	23.70	..	..	..	..	..	1.58
Potatoes ..	0.48	1.29	0.89	0.09	0.19	13.71	..	0.80	0.80
Vineyards	0.30	0.89	0.15	1.41	0.20	..	..	..	0.66
All other ..	0.53	0.90	10.59	0.39	0.27	11.38	90.94	0.64	1.36
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

NOTE.—The area under cotton occupies more than 50,000 acres, but this crop is practically confined to Queensland.

3. Area of Chief Crops, Australia, 1920–21 to 1924–25.—The acreage under each of the principal crops in Australia during the last five seasons is shown below :—

AREA OF CHIEF CROPS.—AUSTRALIA, 1920–21 TO 1924–25.

Crop.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	Acres.	Acres.	Acres.	Acres.	Acres.
Wheat	9,072,167	9,719,042	9,763,861	9,540,434	10,824,966
Hay	3,233,189	2,994,519	3,338,456	3,406,226	3,026,405
Oats	936,996	733,406	1,014,376	1,076,930	1,165,127
Green Forage ..	406,954	452,508	893,871	961,311	564,924
Maize	284,283	305,186	313,202	316,307	398,949
Orchards and Fruit Gardens	278,551	281,149	275,687	273,845	276,904
Barley	334,747	298,910	342,196	258,775	260,248
Sugar-cane ..	174,001	197,293	216,886	237,280	273,512
Potatoes	140.195	149,144	135.735	134,352	138,776
Vineyards	81,165	92,414	105,476	112,965	114,394
All other Crops ..	127,610	133,453	172,504	212,761	233,986
Total ..	15,069,858	15,357,024	16,572,250	16,531,186	17,278,191

During the period under review, the areas of most of the crops, while reflecting seasonal and economic influences, have increased considerably, the most notable advance taking place in wheat. Of the other crops, sugar-cane, vineyards, maize and oats have made the most consistent progress since 1920–21

§ 4. Wheat.

1. **Progress of Wheat-Growing.**—(i) *Area and Production.* Wheat is the principal crop raised in Australia, and the development of wheat-growing during the past 30 years constitutes the most interesting feature of Australian agriculture. Since 1895, when the area under wheat amounted to 3½ million acres, an average of 240,000 acres has been added annually, until in 1924–25 more than 10¾ million acres were cut for grain. The area and yield for wheat for grain are given below for each State for the five years ended 1924–25, and are shown from the year 1860 onwards in the graphs hereinafter. An estimate is also appended for the 1925–26 crop :—

WHEAT.—AREA AND PRODUCTION, 1920–21 TO 1925–26.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
				AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21 ..	3,126,775	2,295,865	177,320	2,167,646	1,275,675	28.284	602	9,072,167
1921–22 ..	3,194,408	2,611,198	164,670	2,384,012	1,336,228	27,985	541	9,719,042
1922–23 ..	2,942,339	2,644,314	145,492	2,453,086	1,552,868	25,244	518	9,763,861
1923–24 ..	2,945,040	2,454,117	51,149	2,418,415	1,656,915	14,503	295	9,540,434
1924–25 ..	3,549,367	2,705,323	189,145	2,499,852	1,867,614	12,954	711	10,824,966
1925–26(*a*) ..	2,928,790	2,513,494	137,144	2,464,395	2,111,871	19,500	..	10,175,194
				YIELD.				
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bush.	Bushels.
1920–21 ..	55,410,993	39,468,625	3,707,357	34,258,914	12,248,080	565,874	14,007	145,873,850
1921–22 ..	42,759,389	43,867,596	3,025,786	24,946,525	13,904,721	577,178	7,611	129,088,806
1922–23 ..	28,660,824	35,697,220	1,877,836	28,784,767	13,857,432	569,587	7,176	109,454,842
1923–24 ..	33,171,300	37,795,704	243,713	34,551,955	18,920,271	305.628	4,700	124,993,271
1924–25 ..	59,752,435	47,364,495	2,779,829	30,528,625	23,887,397	231,388	14,565	164,558,734
1925–26(*a*) ..	33,815,000	29,255,534	1,159,237	28,354,728	20,468,805	390,000	..	113,443,304

(*a*) Preliminary figures.

The area devoted to the production of wheat for grain reached its maximum in 1915–16, when 12,484,512 acres were sown, largely as the result of a special war effort. After that year, however, there was a serious decline, brought about largely by war conditions and unfavourable seasons, and the area in 1919–20 fell to 6,419,160 acres, or only half that of 1915–16. The promise of remunerative Government guarantees, coupled with the prospects of high prices, was responsible for a marked advance in 1920–21, and the area was further extended during the next four years, the total gain for Australia since 1919–20 amounting to nearly 4½ million acres.

Although final figures for 1925–26 for all the States are not yet available, the data to hand indicate the total area under wheat for grain in Australia at about 10,175,000 acres, a decrease of roughly 650,000 acres on the previous year's figure. The season opened favourably, but after the early success a prolonged dry spell reduced the yield to 113,443,304 bushels, or an average of 11.15 bushels to the acre, a satisfactory result in view of the conditions prevailing.

The harvest of 179,065,703 bushels reaped in 1915–16 represents the maximum production of wheat in Australia. Yields exceeding 100,000,000 bushels have been recorded on ten occasions, all of which have occurred since 1913–14. The annual production of wheat during the seasons 1915–16 to 1924–25 averaged 124,180,223 bushels, and the amount by which this average may be exceeded depends to a great extent on seasonal conditions. During each of the last six seasons the yield has exceeded 100 million bushels, the average for the period being 131,235,468 bushels. This is the first occasion on which such a succession of good harvests has occurred, and evidences clearly the value of bare-fallowing and the application of manures. It is the considered opinion of agricultural experts that the improved cultural methods practised by modern wheat-growers preclude the possibility of failure of the wheat crop.

(ii) *Average Yields.* In the next table will be found the average yield of wheat per acre in each of the last five seasons, and for the decennium 1915–25 :—

WHEAT.—YIELD PER ACRE, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1920–21 ..	17.79	17.19	20.91	15.80	9.60	20.01	23.27	16.08
1921–22 ..	13.39	16.80	18.37	10.46	10.41	20.62	14.07	13.28
1922–23 ..	9.74	13.50	12.91	11.73	8.92	22.56	13.85	11.21
1923–24 ..	11.26	15.40	4.76	14.29	11.42	21.07	15.93	13.10
1924–25 ..	16.83	17.51	14.70	12.21	12.79	17.86	20.49	15.20
Average 10 seasons, 1915–25	12.39	14.87	12.82	12.53	10.16	18.40	16.23	12.79

As the above figures show, there were considerable variations in the average yields, chiefly due to the vagaries of the seasons. Over a series of years the yield in Australia has generally averaged about 11 bushels to the acre, but this figure was exceeded during the past decade by 1¾ bushels, mainly owing to the improvement in the cultural methods employed. The excellence of the 1920–21 and 1924–25 seasons is reflected in the splendid averages obtained in those years, the average of the former year being exceeded once only in Australia by the 16.35 bushels reaped as far back as 1866, when less than 1,000,000 acres were sown in relatively fertile areas.

(iii) *Relation to Population.* During the seasons embraced in the following table, the Australian production of wheat per head of population has varied between 19½ bushels in 1922–23 and 28 bushels in 1924–25. The State in which wheat growing generally occupies the most important position relatively to population is South Australia, which in 1924–25 had a yield averaging 57 bushels per head. Queensland and Tasmania are the States in which the average production of wheat per head is least, the quantity raised being generally below that required for local consumption. Particulars for the past five seasons are as follows :—

WHEAT.—YIELD PER 1,000 OF POPULATION, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1920–21 ..	26,594	25,828	4,928	69,749	37,024	2,659	7,103	26,952
1921–22 ..	20,101	28,284	3,930	49,635	41,485	2,643	3,688	23,427
1922–23 ..	13,190	22,448	2,382	56,089	40,329	2,602	2,806	19,430
1923–24 ..	15,013	23,253	300	65,845	53,475	1,395	1,793	21,739
1924–25 ..	26,504	28,583	3,329	56,691	65,602	1,062	4,858	28,107

The normal annual consumption of wheat in Australia, exclusive of the requirements for seed, poultry and other live stock, is 302 lb. (5.03 bushels) per head of population.

2. **Australian and Foreign Wheat Yields.**—(i) *Average Yield.* The next table gives the average return per acre in the principal wheat-growing countries of the world, ranging from Denmark with a maximum of 44 bushels per acre to the Soviet Republics, with a minimum of 8¾ bushels per acre. Australia, with approximately 12½, occupies a relatively subordinate position.

WHEAT.—YIELD PER ACRE, VARIOUS COUNTRIES, 1921–1924.

Country.	Average Yield in Bushels per acre.		Country.	Average Yield in Bushels per acre.	
	Average, 1921–1923.	1924.		Average, 1921–1923.	1924.
Denmark ..	44.14	39.44	Lithuania ..	15.80	15.82
Netherlands ..	40.34	39.13	Bulgaria ..	15.26	11.50
Belgium	38.90	38.27	Rumania ..	14.04	8.98
United Kingdom ..	33.26	33.06	Jugo-Slavia ..	13.77	13.61
Sweden	30.47	21.38	Spain	13.72	11.73
Switzerland ..	29.88	29.81	United States of America ..	13.41	16.10
New Zealand ..	28.49	29.41	Argentine Republic	13.15	10.74
Germany.. ..	26.97	24.62	Cyprus	13.06	9.76
Norway	24.23	23.09	**Australia** ..	**12.53**	**15.20**
Czecho-Slovakia ..	23.63	21.54	India	11.63	11.66
Egypt	23.11	24.14	Greece	11.56	(*b*)12.48
Japan	22.40	29.50	Uruguay ..	11.43	11.48
France	21.04	20.65	Korea	(*a*)11.23	11.63
Chile	18.52	17.77	Algeria	9.89	4.91
Hungary ..	18.32	14.25	Portugal ..	9.16	9.14
Poland	18.05	12.26	French Morocco ..	8.95	11.64
Austria	17.41	17.62	Soviet Republics ..	8.81	7.92
Canada	17.19	11.88			
Italy	16.64	15.08			

(*a*) Average for years 1919–1921. (*b*) Year 1923.

(ii) *Total Production.* The latest available official statistics of the production of wheat in various countries are given in the following table :—

WHEAT.—YIELD IN VARIOUS COUNTRIES, 1921–1924.

Country.	Yield in Bushels (,000 omitted).		Country.	Yield in Bushels (,000 omitted).	
	Average, 1921–1923.	1924.		Average, 1921–1923.	1924.
United States of America ..	818,966	872.687	Japan	27,726	33,911
Canada	391,621	262,101	Chile	24,920	24,866
India	328,954	363,888	French Morocco ..	18,728	28.660
Soviet Republics ..	288,492	330,593	Belgium ..	12,829	13,004
France	280,787	281,182	Greece	11,360	9,660
Argentine Republic	209,034	191,140	Sweden ..	10,933	6,876
Italy	193,107	170,145	Portugal ..	10,722	8,630
Spain	142,578	121,779	Denmark ..	9,740	5,866
Australia	**121,179**	**164,559**	Mexico	8,977	10,357
Germany.. ..	95.394	89,200	Korea	8,789	10,289
Rumania.. ..	90,529	70.421	Uruguay ..	8,704	11.346
United Kingdom ..	66,138	52,872	Tunis	8,071	5,181
Hungary ..	55,165	51,569	New Zealand ..	7,778	5,000
Jugo-Slavia ..	51,709	57.770	Austria	7.614	8,490
Poland	43,199	32,498	Union of Sth. Africa	(*a*)7,144	(*b*)6.027
Czecho-Slovakia ..	36,144	32,238	Netherlands ..	6,591	4,631
Egypt	34,771	34,186	Brazil	4,133	(*c*)4,333
Bulgaria	34,389	28,318	Switzerland ..	3,177	3,112
Algeria	29,845	17,156	Lithuania ..	3,026	3,319

(*a*) Average for years 1919–1921. (*b*) Year 1921. (*c*) Year 1923.

NOTE.—The harvests reported above for 1924 relate to the year 1924 for the Northern, and 1924–25 for the Southern Hemisphere.

The complete compilation of the world's production of wheat is not possible owing to the failure of certain countries to report their harvests. The Institute of Agriculture, Rome, has, however, compiled figures obtained from all the producing countries reporting, with the following results :—

WHEAT.—WORLD'S PRODUCTION (*a*), 1909–13 TO 1924.

Years.	Area.	Yield.	Yield per acre.
	Acres.	Bushels.	Bushels.
Average, 1909–1913 ..	266,421,000	3,703,765,000	13.90
1920	256,448,000	3,214,129,000	12.53
1921	254,686,000	3,312,930,000	13.01
1922	241,990,000	3,403,157,000	14.06
1923	256,900,000	3,828,694,000	14.90
1924	260,883,000	3,424,513,000	13.13
Average, 1920–1924 ..	254,182,000	3,436,685,000	13.52

(*a*) From countries reporting.

It is stated in the Report of the Institute that if all countries for which progress data are lacking were taken into account, the world's total production of wheat may be approximately estimated at 4,500 million bushels.

In 1924 the total area under wheat increased by 4 million acres. The marked reduction in the cultivation of cereal crops in the United States was more than offset by the increase of sowings in Europe, more particularly in the Union of the Soviet Republics, in Australia, and also, in a lesser degree, in Argentine and Asia. The total area under wheat is gradually overtaking the pre-war average.

In spite of the gain in area, the production in 1924 was less than in the previous year owing to seasonal conditions, which were unfavourable in the majority of the centres of production, and particularly in the European countries and in Canada. In these countries the adverse weather conditions greatly reduced the yield per acre, and the average was not only less than in 1923 when the harvest was particularly abundant, but was also lower than the last quinquennial pre-war average. The Australian contribution to the world's production during the past five years amounted to nearly 4 per cent.

3. Prices of Wheat.—(i) *British Wheat.* Since the United Kingdom is the largest importer of Australian wheat, the price of wheat in the British markets is a matter of prime importance to the local producer. The table below gives the average prices per Imperial quarter realized for British grown wheat :—

BRITISH WHEAT.—PRICES PER QUARTER, 1861 TO 1925.

Year.	Average for Year.	Highest Weekly Average.	Lowest Weekly Average.	Year.	Average for Year.	Highest Weekly Average.	Lowest Weekly Average.
	s. d.	*s. d.*	*s. d.*		*s. d.*	*s. d.*	*s. d.*
1861 ..	55 4	61 6	50 0	1919 ..	72 11	73 4	72 5
1871 ..	56 8	60 0	52 6	1920 ..	80 10	90 11	72 6
1881 ..	45 4	55 2	40 9	1921 ..	71 6	89 10	44 0
1891 ..	37 0	41 8	32 3	1922 ..	47 10	56 3	37 5
1901 ..	26 9	27 8	25 8	1923 ..	42 2	49 3	37 6
1911 ..	31 8	33 4	30 0	1924 ..	49 3	56 1	41 5
1917 ..	75 9	83 10	70 3	1925 ..	52 2	59 3	43 11
1918 ..	72 10	74 5	71 2				

(ii) *Australian Export Values.* In the next table will be found a statement of the export values of Australian wheat during each of the last six years :—

AUSTRALIAN WHEAT.—EXPORT VALUES, 1920–21 TO 1925–26.

Heading.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	1925–26.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Price per bushel ..	9 0	5 9	5 5	4 8	6 8	6 4

The export values here shown are the values for the successive years in the principal markets of Australia.

4. **Imports and Exports of Wheat and Flour.**—(i) *Quantities.* The table hereunder shows the imports, exports, and net exports of wheat and flour from 1920–21 to 1924–25. For the sake of convenience, flour has been expressed at its equivalent in wheat, 1 ton of flour being taken as equal to 48 bushels of grain. In ordinary seasons the Australian imports of wheat and flour are negligible. During the past five years the exports ranged between 50,446,320 bushels in 1922–23 and 125,044,344 bushels in 1924–25, the net exports for the period averaging 92,988,452 bushels.

WHEAT AND FLOUR.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Imports.			Exports.			Net Exports.
	Wheat.	Flour.	Total.	Wheat.	Flour.	Total.	
	Bushels.	Eq. Bushels.(a)	Bushels.	Bushels.	Eq. Bushels.(a)	Bushels.	Bushels.
1920–21	1,170	3,696	4,866	76,791,883	11,026,800	87,818,683	87,813,817
1921–22	247	1,728	1,975	99,947,223	17,267,232	117 214,455	117,212,480
1922–23	15,288	2,112	17,400	31,510,272	18,936,048	50,446,320	50,428,920
1923–24	203	1,920	2,123	59,910,480	24,537,168	84,447,648	84,445,525
1924–25	42	2,784	2,826	103,538,088	21,506,256	125,044,344	125,041,518

(a) Equivalent in bushels of wheat.

(ii) *Destination of Exported Breadstuffs.* In the next two tables will be found a list of the principal countries to which Australia exported wheat and flour during each year of the period 1920–21 to 1924–25. The countries are as shown in the Australian Customs returns, but wheat ships are frequently instructed to call for orders at various ports, and the countries to which these ports belong cannot, therefore, always be considered as the ultimate destination of the whole of the wheat said to be exported to them.

WHEAT.—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Country to which Exported.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	Total for Five Years.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
United Kingdom	38,709,680	40,914,035	10,762,600	23,017,707	39,356,580	152,760,602
Italy	2,219,143	18,447,762	11,647,165	6,483,732	15,560,605	54,358,407
France ..	8,921,645	3,341,835	1,284,924	3,562,313	14,580,859	31,691,576
Japan ..	7,332	7,497,943	3,711,211	13,067,907	7,018,627	31,303,020
Egypt ..	10,477,463	3,286,433	38,783	1,339,707	1,887,777	17,030,163
India	25,623	15,035,429	..	..	..	15,061,052
Union of South Africa ..	1,157,778	1,331,417	2,545,162	3,721,697	3,674,773	12,430,827
Belgium ..	5,754,723	1,312,480	178,930	622,283	4,440,158	12,308,574
Germany ..	2,504,690	2,996,292	397	110,770	3,061,950	8,674,099
Netherlands ..	2,202,653	1,192,977	..	142,753	3,297,382	6,835,765
New Zealand ..	602,843	73,539	..	1,247,362	2,682,908	4,606,652
Canary Islands(a)	3,532,793	236,807	..	..	470,527	4,240,127
Sweden ..	..	..	412,547	1,304,445	1,040,585	2,757,577
Norway ..	342,510	960,855	117,012	106,415	326,037	1,852,829
Peru	..	697,205	167,110	..	528,367	1,392,682
Ceylon ..	303	257,098	993	950	1,632	260,976
Other Countries	332,704	2,365,116	643,500	5,182,439	5,609,321	14,133,080
Total ..	76,791,883	99,947,223	31,510,334	59,910,480	103,538,088	371,698,008

(a) For orders.

The exports of flour during the same period and the principal countries of destination were as follows :—

FLOUR.—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Country to which Exported.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	Total for Five Years.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Egypt	61,502	108,550	127,072	182,938	172,416	652,478
United Kingdom	81,952	103,634	83,804	92,425	103,817	465,632
Netherlands East Indies ..	15,388	41,826	50,899	49,262	44,875	202,250
Union of South Africa ..	41,458	24,947	39,250	37,685	25,475	168,815
Malaya (British)	8,264	20,471	32,619	33,683	29,408	124,445
Philippine Islands	3,040	10,749	10,292	13,012	10,016	47,109
Hong Kong	368	10,003	6,318	11,739	13,247	41,675
Ceylon	755	6,282	7,681	10,142	10,416	35,276
Mauritius	3,320	5,639	8,757	8,569	6,496	32,781
Japan	480	6,555	1,664	15,430	156	24,285
China	77	4,391	260	12,905	219	17,852
New Caledonia	3,202	3,532	3,517	3,765	3,522	17,538
Portuguese East Africa ..	2,477	3,542	3,475	2,963	2,621	15,078
Fiji	1,362	2,484	2,602	3,024	2,989	12,461
New Zealand	137	95	84	294	4,258	4,868
Papua	636	322	378	780	912	3,028
India	4	657	1,063	130	470	2,324
Italy	..	..	112	2,025	156	2,293
Other Countries	5,303	6,055	14,654	30,420	16,578	73,010
Total	229,725	359,734	394,501	511,191	448,047	1,943,198

For the five years under review the export of wheat to the United Kingdom amounted to 152,760,602 bushels, or 41.09 per cent. of the total export for the period, while the export of flour to the same destination aggregated 465,632 tons, or 23.96 per cent. of the total export. The country to which the largest consignments of flour were made during the last quinquennium was Egypt, followed by the United Kingdom, Netherlands East Indies, Union of South Africa, and Malaya (British).

(iii) *Exports of Wheat and Flour.* From the foregoing returns it will be seen that the quantity of wheat exported in the form of flour during the past five years represents, on the average, about 20 per cent. of the total equivalent in wheat exported as wheat or flour from Australia.

A point of some interest in connexion with the export of wheat, and one which bears also on the proportion of wheat and flour exports just referred to, is that concerning the quantity of phosphoric acid which this export has the effect of removing from Australia, and the necessity which exists for the return to the soil of this substance in some form.

According to an estimate furnished by the chemist to the New South Wales Department of Agriculture (F. B. Guthrie, Esq., F.C.S., &c.), the proportions of milled product from a bushel (60 lb.) of wheat are, approximately, 42 lbs. of flour, 9 lbs. of bran, and 9 lbs. of pollard, while the percentage of phosphoric acid contained in these products is as follows :—

Flour	0.32 per cent., or	0.13 lb. per bushel.
Bran	3.00 ,,	0.27 ,,
Pollard	0.90 ,,	0.08 ,,

The total amount of phosphoric acid contained in a bushel of wheat, is, therefore, 0.48 lb., of which 0.13 lb. is in the flour and 0.35 lb. in the offal.

During the last ten years the net exports from Australia of wheat and its milled products have amounted to 599,980,249 bushels of wheat, 3,755,243 tons of flour, and 6,936,025 bushels of bran, pollard, and sharps. On the basis of the figures quoted above this export would contain no less than 314,120,000 lbs. of phosphoric acid, the value of which as a fertilizer would amount to approximately four million pounds sterling.

5. **Local Consumption of Wheat.**—The estimated consumption of wheat for food and for seed purposes in Australia during the past ten years is given in the following tables :—

WHEAT.—HUMAN CONSUMPTION, AUSTRALIA, 1915–16 TO 1924–25.

Year.	Flour Milled.	Net Exports of Flour.		Net Quantity Available for Home Consumption.		Net Quantity Available per Head of Population.	
		Flour.	Flour in Biscuits Exported.	Flour.	Equivalent in Terms of Wheat.	Flour.	Equivalent in Terms of Wheat.
	Tons.	Tons.	Tons.	Tons.	Bushels.	Tons.	Bushels.
1915–16 ..	577,038	146,618	2,650	427,770	20,532,960	.0861	4.131
1916–17 ..	869,975	290,572	2,885	576,518	27,672,860	.1171	5.623
1917–18 ..	985,761	374,062	9,810	601,889	28,890,670	.1205	5.784
1918–19 ..	1,046,268	483,340	6,437	556,491	26,711,570	.1098	5.270
1919–20 ..	1,050,228	517,708	4,590	527,930	25,340,640	.1000	4.801
1920–21 ..	801,511	229,648	3,375	568,488	27,287,420	.1052	5.050
1921–22 ..	911,452	359,698	2,284	549,470	26,374,560	.0999	4.798
1922–23 ..	985,479	394,457	1,831	589,191	28,281,170	.1049	5.034
1923–24 ..	1,092,856	511,151	1,727	579,978	27,838,940	.1011	4.853
1924–25 ..	1,068,698	447,989	1,814	618,895	29,706,960	.1054	5.058
Aggregate 10 years	9,389,266	3,755,243	37,403	5,596,620	268,637,760	.1047	5.028

WHEAT USED FOR SEED.—AUSTRALIA, 1915 TO 1924.

Year.	Area for Grain and Hay.	Wheat for Seed Purposes.		
		Quantity.	Per Acre.	Per Head of Population.
	Acres.	Bushels.	Bushels.	Bushels.
1915	14,414,024	13,041,000	.905	2.624
1916	12,894,917	11,523,000	.894	2.343
1917	10,910,669	9,713,000	.890	1.949
1918	9,428,398	9,054,000	.960	1.782
1919	8,250,572	7,774,000	.942	1.466
1920	10.271,055	9,471,000	.922	1.750
1921	10,878,401	10,077,000	.926	1.847
1922	11,253,078	10,456,000	.929	1.878
1923	11,016,608	10,328,000	.937	1.816
1924	11,859,102	10,967,000	.925	1.890
Aggregate for 10 years ..	111,176,824	102,404,000	.921	1.933

In addition to the above, the quantity of grain fed to poultry and other live stock as well as that used as seed for green forage crops must be taken into consideration. These quantities vary from year to year according to the price of wheat and the nature of the season, and sufficient data are not available on which to base an annual estimate, but, taken over a period, the amount so consumed has been estimated to range from one half to one bushel per head of population per annum. The flour available for human consumption necessarily fluctuates from year to year coincident with stocks. In some years the flour available per head of population, after deducting net exports from the quantity milled, shows a substantial increase over the average for the previous year, this, however, being counterbalanced by a decline in the following year. The average quantity of flour consumed per annum for the ten years under consideration was 0.1047 tons per head of population, which, expressed in equivalent terms in wheat, represents 5.028 bushels. The estimates of quantity of grain used for seed purposes are based on data supplied by the Agricultural departments of the several States giving average quantities of seed used per acre for wheat sown either for grain or hay. The average annual quantity thus used during the ten years was 1.933 bushels per head of population, and 0.921 bushels or 55 lbs. per acre sown. For all purposes the consumption of wheat in Australia during the past four years averaged 43,545,000 bushels, or 7.65 bushels per head of the population.

6. Value of the Wheat Crop.—The estimated value of the wheat crop in each State and in Australia during the season 1924–25 is shown below :—

WHEAT.—VALUE OF CROP (*a*), 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Aggregate value..	20,913,350	15,196,109	810,783	9,285,892	7,265,750	70,201	5,100	53,547,185
Value per acre ..	£5/17/10	£5/12/4	£4/5/9	£3/14/4	£3/17/10	£5/8/5	£7/3/5	£4/18/11

(*a*) Exclusive of the value of straw.

7. Voluntary Wheat Pools.—Reference to the operations of the Voluntary Wheat Pools in the various States during 1925–26 will be found in the Appendix at the end of this volume.

§ 5. Oats.

1. Progress of Cultivation.—(i) *Area and Yield.* Oats came next in importance to wheat amongst the grain crops cultivated last season, but while wheat grown for grain accounted for 62.65 per cent., oats represented only 6.74 per cent, of the area under crop in Australia. The progress in cultivation of oats for the last five years is shown in the table hereunder, and more fully in the graphs herein :—

OATS.—AREA AND YIELD, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
				AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21	77,537	443,636	4,690	167,001	193,486	50,474	172	936,996
1921–22	69,619	318,681	2,274	125,148	162,866	54,642	176	733,406
1922–23	73,635	492,356	1,216	173,716	214,269	58,813	371	1,014,376
1923–24	86,402	520,654	216	176,299	241,608	51,460	291	1,076,930
1924–25	122,994	517,229	4,010	155,214	318,982	46,175	523	1,165,127
				YIELD.				
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1920–21	1,640,552	10,907,191	103,933	2,331,067	2,022,031	1,514,155	2,148	18,521,077
1921–22	1,168,406	6,082,258	34,409	1,297,646	2,019,603	1,543,617	1,494	12,147,433
1922–23	1,243,198	8,093,459	19,499	1,681,783	2,261,863	1,674,751	7,602	14,982,155
1923 24	1,564,970	9,366,205	2,427	2,157,938	2,846,670	1,359,785	5,330	17,303,325
1924–25	2,500,951	9,572,003	63,912	1,939,415	4,241,074	1.065,933	10,449	19,393,737

The oat crop exhibited little variation during the past decennium, ranging on the average around 14,500,000 bushels. The demand for the grain for oatmeal is limited to about 2,000,000 bushels annually. It is mainly used as feed grain, and its value, particularly in good seasons, is not sufficient to warrant the increase in cultivation which may be expected when oats is marketed through live stock and more remunerative prices thereby realized than those now offering on the local market.

The principal oat-growing State is Victoria, which produces more than half the total quantity of oats grown in all States. For Australia as a whole the record yield of oats was obtained during the past season, when 19,393,737 bushels were harvested.

(ii) *Average Yield.* The average yield per acre of oats varies considerably in the different States, being highest in Tasmania and lowest in South Australia. Particulars as to average yield in each of the last five seasons, and for the decennium 1915–25 are given in the succeeding table :—

OATS.—AVERAGE YIELD PER ACRE, 1920–21 TO 1924–25.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1920–21	21.16	24.59	22.16	13.96	10.45	30.00	12.49	19.77
1921–22	16.78	19.09	15.13	10.37	12.40	28.25	8.49	16.56
1922–23	16.88	16.44	16.04	9.68	10.56	28.48	20.49	14.77
1923–24	18.11	17.99	11.24	12.24	11.78	26.42	18.32	16.07
1924–25	20.33	18.51	15.94	12.50	13.30	23.08	19.98	16.65
Average for 10 seasons 1915–25	17.30	18.60	16.82	11.60	12.04	25.36	18.19	16.35

The smallest average yield per acre ever recorded for Australia was that experienced in the abnormally dry season 1914–15, viz., 5.60 bushels, while the largest in the past ten years was that of the season 1915–16, amounting to 22.92 bushels per acre.

(iii) *Relation to Population.* The State in which oat production occupies the most important position in relation to population is Tasmania, the yield for that State representing about 6½ bushels per head during the last five years, as compared with 2.92 bushels per head for Australia as a whole. Particulars for the seasons 1920–21 to 1924–25 are furnished in the succeeding table :—

OATS.—YIELD PER 1,000 OF POPULATION, 1920–21 TO 1924–25.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1920–21	785	7,138	138	4,746	6,112	7,114	1,089	3,422
1921–22	549	3,922	45	2,582	6,026	7,067	724	2,205
1922–23	572	5,090	25	3,277	6,583	7,650	2,973	2,660
1923–24	708	5,762	3	4,112	8,046	6,207	2,033	3,009
1924–25	1,109	5,776	76	3,601	11,647	4,893	3,485	3,302

2. **Comparison with Other Countries.**—(i) *Total Production.* A comparison of the Australian production of oats with that of the leading oat-producing countries of the world is furnished in the following table :—

OATS.—PRODUCTION IN VARIOUS COUNTRIES, 1921–1924.

Country.	Yield in Bushels (000 omitted).		Country.	Yield in Bushels (000 omitted).	
	Average, 1921–1923.	1924.		Average, 1921–1923.	1924.
United States of America ..	958,313	1,233,524	Lithuania ..	18,633	14,867
Canada	419,779	345,077	Austria	16,844	18,274
Soviet Republics ..	374,436	391,629	Netherlands ..	16,061	16,705
Germany.. ..	277,919	311,624	Jugo-Slavia ..	15,449	16,637
France	231,913	244,430	**Australia** ..	**14,811**	**19,394**
Poland	150,823	132,937	Latvia	13,714	14,936
United Kingdom ..	130,235	138,206	Japan	9,730	7,946
Czecho-Slovakia ..	63,620	66,369	Algeria	9,341	7,310
Rumania.. ..	60,993	33,611	Norway ..	9,158	8,513
Sweden	60,852	59,514	Estonia ..	7,157	7,741
Argentine Republic	47,877	42,765	Portugal ..	7,036	4,368
Denmark ..	46,311	50,566	Bulgaria ..	6,997	5,925
Belgium	31,484	35,365	Union of South Africa ..	(*a*)5,760	(*b*)6,482
Irish Free State ..	30,109	29,567	New Zealand ..	5,185	4,875
Italy	28,818	26,637	Greece	4,283	3,250
Spain	28,604	24,136	Chile	2,434	2,707
Finland	20,671	27,130	Switzerland ..	2,283	2,155
Hungary ..	19,118	12,570	Uruguay ..	1,562	2,560

(*a*) Average years 1919–1921. (*b*) Year 1921.

(ii) *Yield per Acre.* The average yield per acre of oats is very low in Australia compared with other countries where its cultivation is more extensive. Arranging the countries contained in the foregoing table according to the magnitude of average yield for the years specified, the results are as follows :—

OATS.—YIELD PER ACRE, VARIOUS COUNTRIES, 1921–1924.

Country.	Yield in Bushels per acre.		Country.	Yield in Bushels per acre.	
	Average, 1921–1923.	1924.		Average, 1921–1923.	1924.
Belgium ..	47.83	54.07	Austria	23.30	23.96
Switzerland ..	44.47	39.98	Hungary ..	22.89	17.12
Netherlands ..	41.70	44.37	United States of America ..	22.63	29.06
Denmark ..	41.45	44.32	Finland ..	20.10	25.86
United Kingdom ..	37.39	41.56	Latvia	20.05	18.08
Irish Free State ..	36.85	39.09	Bulgaria ..	19.94	15.87
New Zealand ..	34.97	(*c*)29.04	Argentine Republic	19.23	16.16
Germany.. ..	34.75	35.78	Estonia ..	19.00	18.86
Sweden	34.16	31.10	Rumania ..	18.90	11.00
Japan	(*a*)32.36	28.96	Spain	18.32	14.76
Czecho-Slovakia ..	31.50	31.76	Soviet Republics ..	16.67	13.86
Chile	31.32	33.24	Algeria ..	16.20	11.75
Norway	30.57	37.01	Jugo-Slavia ..	15.91	19.09
Canada	27.45	23.81	**Australia** ..	**15.73**	**16.65**
France	27.42	28.30	Portugal ..	15.45	7.74
Poland	26.86	20.81	Uruguay ..	13.41	20.14
Greece	(*b*)26.57	(*c*)26.57	Tunis	10.60	11.29
Lithuania ..	23.78	18.51			
Italy	23.77	24.08			

(*a*) Average years 1922–1924. (*b*) Average years 1922–1923. (*c*) Year 1923.

3. **World's Production.**—The production of oats in the world for the year 1924, as reported by the International Institute of Agriculture, amounted to 3,373 millions of bushels. The yield was less than that of the previous year, viz., 3,505 millions of bushels, owing to the lightness of the crop in the majority of European countries. In the pre-war years 1909 to 1913 the production averaged 3,588 millions of bushels from an average area of 141,700,000 acres. Subsequently the area declined in Europe, but a considerable increase was recorded in North America, with the result that in 1924 nearly 138,000,000 acres were sown to oats.

4. **Price of Oats.**—The average wholesale prices of oats in the markets of the several capitals for the year 1924–25 are given in the following table :—

OATS.—AVERAGE WHOLESALE PRICES, 1924–1925.

Particulars.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Average price per bushel ..	4 7	3 0	..	2 4½	3 4	3 4½

5. **Imports and Exports.**—The production of oats in Australia has not yet reached sufficient proportions to admit of a regular export trade ; in fact in certain years the imports have exceeded the exports, notably in 1903, 1906, 1908, 1910, in each of the four years prior to 1916–17, and in 1922–23. The quantities and values of oats imported into and exported from Australia during the years 1920–21 to 1924–25 are given hereunder :—

OATS.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1920–21 ..	139,728	30,057	865,588	143,874	725,860	113,817
1921–22 ..	14,880	2,569	325,792	49,980	310,912	47,411
1922–23 ..	557,523	90,255	35,895	7,506	−521,628	−82,749
1923–24 ..	108,260	18,624	190,453	41,647	82,193	23,023
1924–25 ..	1,723	482	219,278	42,255	217,555	41,773

NOTE.—(−) signifies net import.

The principal country from which imports of oats have been obtained is New Zealand, while the principal countries to which oats were exported during the period under review were New Zealand, Java, and the United Kingdom.

6. **Oatmeal, etc.**—The production of oatmeal in Australia during 1924–25 amounted to 310,280 cwts., practically the whole of which is consumed locally. Oversea trade in this and similar products is small, the importations of oatmeal, wheatmeal and rolled oats during 1924–25 amounting to 107,026 lbs., while the exports totalled 925,734 lbs.

7. **Value of Oat Crop.**—The estimated value of the oat crop of the several States of Australia for the season 1924–25 is as follows :—

OATS.—VALUE OF CROP, (*a*) 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Aggregate value..	416,830	1,316,150	25,565	210,097	596,401	167,591	1,740	2,734,374
Value per acre ..	£3/7/9	£2/10/11	£6/7/6	£1/7/1	£1/17/5	£3/12/7	£3/6/6	£2/6/11

(*a*) Exclusive of the value of straw.

§ 6. Maize.

1. **States Growing Maize.**—Maize is grown for grain chiefly in New South Wales and Queensland, the area so cropped in these States during the season 1924–25 being 375,724 acres, or nearly 94 per cent. of the total for Australia. Of the balance, Victoria contributed 23,126 acres, South Australia 7 acres, Western Australia 71 acres, and the Northern Territory 21 acres. The climate of Tasmania is unsuitable for the growing of maize for grain. In all the States, the crop is grown to a greater or less extent for green forage, particularly in connexion with the dairying industry.

2. **Progress of Maize-growing.**—(i) *Area and Yield.* Notwithstanding its valuable properties and its pre-eminence as the world's most extensively grown cereal, the cultivation of maize has decreased in Australia by about 20,000 acres during the past decennium. Increases in area were recorded in both Queensland and Victoria, but the decline of more than 30,000 acres in New South Wales was responsible for the reduction in the total for Australia. The maximum area sown to maize was 414,914 acres, as far back as 1910–11, this acreage being considerably in excess of the average planted during the last ten years which amounted to 318,597 acres. The area and yield of maize for grain in each State are given in the following table for the last five years. The fluctuations from year to year are shown more fully on the graph herein.

MAIZE.—AREA AND YIELD, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Nor. Ter.	Fed. Cap. Ter.	Australia.
				AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21	144,105	24,149	115,805	199	19	6	..	284,283
1921–22	146,687	23,227	135,034	186	43	9	..	305,186
1922–23	138,169	25,846	149,048	116	23	..	..	313,202
1923–24	166,933	29,104	120,092	94	43	..	41	316,307
1924–25	146,564	23,126	229,160	7	71	21	..	398,949
				YIELD.				
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1920–21	4,176,000	1,065,880	2,012,864	3,738	240	60	..	7,258,782
1921–22	3,976,300	951,960	2,907,754	3,792	540	92	..	7,840,438
1922–23	3,287,500	879,915	3,217,848	2,716	335	..	..	7,388,314
1923–24	4,621,950	1,464,731	2,024,902	1,266	834	..	1,050	8,114,733
1924–25	4,208,200	891,987	7,330,821	276	333	420	..	12,432,037

The maximum production of maize in Australia was recorded in 1910–11, when the harvest exceeded 13,000,000 bushels. No approach to this figure was made in recent years, until a superabundant crop in Queensland during 1924 brought the total to nearly 12,500,000 bushels, but the average for the past decade was only 8,000,000 bushels. Moreover the falling-off in the demand coupled with the low market price for the grain adversely affected the industry, particularly in Queensland, and the harvest during 1925–26 is estimated to yield only 7,500,000 bushels.

A maize reaper-thresher, invented and manufactured in Australia, was used in the maize fields of Queensland during the past season, and proved most suitable for the work for which it was designed. The invention promises to have a far-reaching effect in reducing the cost of maize production.

(ii) *Average Yield.* The following table gives particulars of the average yield per acre of the maize crops of the States for the seasons 1920–21 to 1924–25, and also for the decennium 1915–25 :—

MAIZE.—AVERAGE YIELD PER ACRE, 1920–21 TO 1924–25.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	N. Ter.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1920–21	28·98	44·14	17·38	18·78	12·63	10·00	..	25·53
1921–22	27·11	40·99	21·53	20·39	12·56	10·22	..	25·69
1922–23	23·79	34·04	21·59	23·41	14·57	..	..	23·59
1923–24	27·69	50·33	16·86	13·47	19·40	..	25·61	25·65
1924–25	28·71	38·57	31·99	39·43	4·70	20·00	..	31·16
Average for 10 seasons 1915–25	26·24	42·77	21·81	18·65	11·56	12·06	22·10	25·38

With the exception of Canada, the average yield of maize per acre in Victoria is the largest in the world. This is due, in large measure, to the fact that the area under maize in that State is comparatively small and is situated in districts peculiarly suited to its growth. The average yield in New South Wales exceeds that obtained in Queensland.

(iii) *Relation to population.* During the past five seasons the Australian production of maize has averaged 1½ bushels per head of population, while the average for Queensland, the State in which the production per head is highest, amounted to 4⅓ bushels. Details for the several States during the past five seasons are as follow :—

MAIZE.—YIELD PER 1,000 OF POPULATION, 1920–21 TO 1924–25.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	N. Ter.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1920–21 ..	1,997	697	2,676	8	1	15	..	1,341
1921–22 ..	1,869	614	3,776	8	2	25	..	1,423
1922–23 ..	1,513	553	4,082	5	1	..	..	1,312
1923–24 ..	2,092	901	2,496	2	2	..	400	1,411
1924–25 ..	1,866	538	8,781	5	9	117	..	2,117

3. **Australian and Foreign Maize Production.**—(i) *Total Yield.* The United States of America is the most important maize-producing country of the world. On the average 100,000,000 acres are annually planted in that country, and 3,000,000,000 bushels reaped, representing nearly 75 per cent. of the world's production. Of the huge quantities raised, about 85 per cent. is fed to live stock on farms, 10 per cent. is used for human food, and only a very small fraction, viz., 1½ per cent., is exported. The yields of the various countries are as follow :—

MAIZE.—PRODUCTION IN VARIOUS COUNTRIES, 1921–1924.

Country.	Yield in Bushels (000 omitted).		Country.	Yield in Bushels (000 omitted).	
	Average, 1921–1923.	1924.		Average, 1921–1923.	1924.
United States of America ..	3,004,534	2,436,493	Czecho-Slovakia	9,979	10,239
Argentine Republic	199,797	186,300	Salvador ..	(*a*)7,836	10,629
Brazil	179,943	(*c*)157,037	Greece ..	(*b*)7,820	7,106
Rumania ..	127,318	155,460	**Australia** ..	**7,731**	**12,432**
India	86,480	(*c*)87,120	Belgian Congo ..	7,152	(*c*)7,480
Italy	85,775	105,680	Uruguay ..	6,691	(*c*)6,519
Jugo-Slavia ..	82,569	149,400	Guatemala ..	5,880	(*c*)7,874
Mexico	80,196	106,346	Japan	5,476	(*c*)3,369
Soviet Republics ..	70,799	68,305	French Morocco	5,093	4,724
Egypt	65,072	(*c*)67,103	Madagascar ..	4,512	3,937
Dutch East Indies	52,273	66,761	Rhodesia ..	4,348	4,286
Union of South Africa ..	48,355	73,214	Togoland ..	3,517	5,315
Hungary ..	37,815	74,123	Austria ..	3,153	3,719
Spain	25,218	25,804	Korea	2,799	2,375
Bulgaria ..	19,575	27,264	Poland ..	2,624	4,161
Philippine Islands	16,221	17,879	Kenya	2,463	(*c*)2,977
Canada	14,103	11,978	Basutoland ..	1,996	(*c*)1,677
France	11,914	18,027	Paraguay ..	1,821	1,417
Portugal ..	11,086	11,212	French West Africa ..	1,475	3,157

(*a*) Average, years 1920–1922. (*b*) Average, years 1919–1920. (*c*) Year 1923.

(ii) *Yield per Acre.* The average yield per acre of maize in Australia during 1924–25 was 31.2 bushels, which may be regarded as satisfactory when compared with those of other maize-producing countries, the yields per acre for which are shown in the following table :—

MAIZE.—YIELD PER ACRE IN VARIOUS COUNTRIES, 1921–1924.

Country.	Average Yield per acre in Bushels.		Country.	Average Yield per acre in Bushels.	
	Average, 1921–1923.	1924.		Average, 1921–1923.	1924.
Canada	45·35	40·67	Salvador ..	(*c*)17·12	16·67
Belgian Congo ..	35·38	(*f*)34·40	Soviet Republics	16·73	17·69
Egypt	32·61	(*f*)35·98	Greece	(*g*)16·58	(*d*)15·26
Kenya	30·73	(*f*)27·43	French West Africa	16·44	33·10
Japan	29·63	(*f*)24·78	Poland	15·65	21·89
United States of America ..	29·05	23·20	Rumania ..	15·08	17·37
Argentine Republic	25·34	20·33	Portugal ..	14·94	(*f*)13·60
Australia ..	**24·97**	**31·16**	France	14·59	21·31
Czecho-Slovakia ..	24·50	26·32	Guatemala ..	14·44	(*f*)17·22
Italy	22·74	27·76	Bulgaria ..	14·34	18·61
Brazil	(*b*)22·43	(*f*)18·56	Dutch East Indies	13·51	15·33
Togoland ..	22·24	23·90	Philippine Islands	11·92	13·58
Madagascar ..	(*a*)21·79	19·92	India	(*e*)11·89	(*h*) 9·32
Spain	21·60	22·20	Mexico	10·80	13·18
Austria	20·05	25·25	Korea	10·71	10·37
Paraguay ..	19·05	13·19	Uruguay ..	9·92	(*f*)11·32
Hungary ..	18·05	29·90	Union of South Africa ..	(*g*)9·61	(*d*) 7·64
Jugo-Slavia ..	17·66	30·76	French Morocco ..	8·42	6·91
Rhodesia ..	17·61	15·62	Basutoland ..	8·41	(*f*) 7·06

(*a*) Average, years 1923–1924. (*b*) Years 1922–1923. (*c*) Year 1920. (*d*) Year 1921. (*e*) Average, years 1921–1922. (*f*) Year 1923. (*g*) Years 1919–1921. (*h*) Year 1922.

4. **World's Production.**—Owing to unfavourable weather conditions, the maize harvest in the United States for 1924 was considerably below the average, while the yield in the Argentine was also moderate. On the other hand, the season in Europe was, generally speaking, very favourable, and heavy crops were obtained. According to the International Institute of Agriculture the area sown to maize in 1924 was not only greater than the pre-war average, but exceeded the very large acreage planted in 1923. Despite the increased area, however, the yield failed to reach the figures recorded in the two periods mentioned above, consequent on the falling off in the United States, which usually contributes about 75 per cent. of the world's production. The total yields from 1909 to 1923 were as follows :—

Average 1909 to 1913,	4,083,000,000	bushels.
1921,	4,290,000,000	,,
1922,	4,228,000,000	,,
1923,	4,508,000,000	,,

Particulars for 1924 are not yet available.

5. **Price of Maize.**—The average wholesale price of maize in the Sydney market for each of the last five years is given in the following table :—

MAIZE.—AVERAGE PRICE, SYDNEY, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
Average price per bushel ..	6 6	5 2	6 1	5 1	3 11

6. **Oversea Imports and Exports.**—The decline in the production of maize in Australia of late years has necessitated an average annual import of about 800,000 bushels during the past decade, the bulk of the supplies being furnished by South Africa. Details of imports and exports for the years 1920–21 to 1924–25 are as follow :—

MAIZE.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Imports.		Exports.		Net Imports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1920–21 ..	96,536	40,097	77,489	27,162	19,047	12,935
1921–22 ..	45,066	9,791	36,320	9,023	8,746	768
1922–23 ..	1,198,673	264,758	8,427	2,736	1,190,246	262,022
1923–24 ..	2,572,809	515,468	37,918	9,524	2,534,891	505,944
1924–25 ..	480	242	2,554,052	511,921	– 2,553,572	– 511,679

NOTE.—(–) denotes net exports.

7. **Prepared Maize.**—A small quantity of corn-flour is imported annually into Australia, the principal countries of supply being the United Kingdom and the United States of America. During the year 1924–25 the imports amounted to 299,198 lb., and represented a value of £5,273. The exports from Australia are small, and amounted to only 19,177 lb., valued at £490 in 1924–25.

8. **Value of Maize Crop.**—The value of the Australian maize crop for the season 1924–25 has been estimated at £2,467,086, made up as follows :—

MAIZE.—VALUE OF CROP, 1924–25.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	N.T.	Australia.
	£	£	£	£	£	£	£
Aggregate value	841,640	189,547	1,435,619	87	113	80	2,467,086
Value per acre	£5/14/10	£8/3/1	£6/5/4	£12/8/6	£1/11/10	£3/16/2	£6/3/8

§ 7. Barley.

1. **Progress of Cultivation.**—(i) *Area and Yield.* The area under barley in Australia has fluctuated very considerably, but results for the last ten years show a marked rise. The average annual area sown for the decennium 1915 to 1925 amounted to 262,169 acres, which was nearly double the average of the previous ten-yearly period, i.e., 139,413 acres. Victoria was originally the principal barley growing State, but the rapid expansion of the cultivation of this crop in South Australia during recent years brought the latter State into the lead in 1913–14, and, during 1924–25, the area under barley in South Australia accounted for more than 64 per cent. of the Australian acreage. Victoria was

next in importance with 25 per cent., leaving a small margin of about 11 per cent. distributed among the other States. The figures here given relate to the areas harvested for grain ; small areas only are cropped for hay, while more considerable quantities are cut for green forage. These, however, are not included in this sub-section. The area and yield of barley for grain in the several States are shown in the following table for the last five years, while the progress since 1860 is illustrated in the graphs herein :—

BARLEY.—AREA AND YIELD, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
				AREA.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21 ..	5,969	93,954	15,908	202,079	10,686	6,151	334,747
1921–22 ..	5,031	100,127	7,730	170,887	7,894	7,241	298,910
1922–23 ..	3,899	102,773	5,292	215,283	9.243	5,706	342,196
1923–24 ..	4,350	56,564	665	184,286	8,673	4,230	*a*258,775
1924–25 ..	6,638	63,764	8,798	166,432	11,606	3,010	260,248
				YIELD.			
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1920–21 ..	123,290	2,495,762	317,511	3,946,062	111,405	161,346	7,155,376
1921–22 ..	83,950	2,336.246	133,885	3,278,787	85,857	166.960	6.085,685
1922–23 ..	55,520	2,442.041	93.693	3,697,849	107,804	152,028	6,548.935
1923–24 ..	71,700	1,455,435	3,808	3,251,885	97,779	94,634	*a*4,975,451
1924–25 ..	118,300	1,444,823	171,124	3,103,718	177,537	50,729	5,066,231

(*a*) Including Federal Capital Territory, 7 acres, 210 bushels.

The States in which the annual production of barley averaged over 1,000,000 bushels for the past decade were South Australia and Victoria, the yields being respectively 2,722,771 and 1,923,654 bushels, the higher return in the latter State tending to diminish the advantage held by South Australia in regard to acreage.

(ii) *Malting and other Barley.* (*a*) *Year 1924–25.* In recent years the statistics of all the States have distinguished between " malting " and " other " barley. Particulars for the season 1924–25 are as follows :—

BARLEY, MALTING AND OTHER.—AREA AND YIELD, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Malting barley ..	4,191	42,217	6,268	150,584	5,914	2,587	211,761
Other barley ..	2,447	21,547	2,530	15,848	5,692	423	48,487
Total ..	6,638	63,764	8,798	166,432	11,606	3,010	260,248
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Malting barley ..	76,530	971,532	127,645	2,853,255	93,192	41,742	4,163,896
Other barley ..	41,770	473,291	43,479	250,463	84,345	8,987	902,335
Total ..	118,300	1,444,823	171,124	3,103,718	177,537	50,729	5,066,231

The cultivation of malting barley is a special industry to meet the demands of the brewing trade. Its expansion, however, appears to be restricted, although of late years the exports have considerably increased. Taking Australia as a whole, more than 82 per cent. of the area under barley in 1924–25 was sown with the malting variety. The proportion varies largely in the several States.

(*b*) *Progress of Cultivation.* The following table sets out the acreage and yield of malting and other barley in Australia as a whole during the past five seasons :—

BARLEY, MALTING AND OTHER.—AREA AND YIELD, AUSTRALIA, 1920–21 TO 1924–5.

Season.	Acres.			Bushels.			Average Yields per Acre.		
	Malting.	Other.	Total.	Malting.	Other.	Total.	Malting.	Other.	Total.
1920–21 ..	249,908	84,839	334,747	5,248,861	1,906,515	7,155,376	21.00	22.47	21.38
1921–22 ..	218,662	80,248	298,910	4,430,599	1,655,086	6,085,685	20.26	20.62	20.36
1922–23 ..	279,159	63,037	342,196	5,283,144	1,265,791	6,548,935	18.93	20.08	19.14
1923–24 ..	217,613	41,162	258,775	4,196,008	779,443	4,975,451	19.28	18.94	19.23
1924–25 ..	211,761	48,487	260,248	4,163,896	902,335	5,066,231	19.66	18.61	19.47
Average 10 seasons 1915–25	194,589	67,580	262,169	3,756,709	1,319,514	5,076,223	19.31	19.53	19.36

During the past ten seasons the area and production of malting barley have represented nearly three times the corresponding figures for other barley. The average yield per acre differs very little in respect of the two classes, the results for the past ten-yearly period being slightly in favour of the Cape variety.

(iii) *Average Yield.* The average yield of barley per acre varies considerably in the different States, being as a rule highest in Victoria and Tasmania, and lowest in Western Australia. Details for each State during the past five seasons, and for the decennium 1915–25, are given in the following table :—

BARLEY.—YIELD PER ACRE, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1920–21	20.66	26.56	19.96	19.53	10.43	26.23	21.38
1921–22	16.69	23.33	17.32	19.19	10.88	23.06	20.36
1922–23	14.24	23.76	17.70	17.18	11.66	26.64	19.14
1923–24	16.48	25.73	5.73	17.65	11.27	22.37	19.23
1924–25	17.82	22.66	19.45	18.65	15.30	16.85	19.47
Average for 10 seasons 1915–25	15.12	22.84	18.01	18.01	11.79	21.67	19.36

(iv) *Relation to Population.* During the last five seasons the quantity of barley produced in Australia has averaged 1 bushel per head of population. For the season 1924–25 the production ranged from 5.76 bushels per head in South Australia to 0.2 lbs. per head in New South Wales. Details for the years 1920–21 to 1924–25 are as follows :—

BARLEY.—PRODUCTION PER 1,000 OF POPULATION, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1920–21	59	1,633	422	8,034	337	758	1,322
1921–22	39	1,506	174	6,524	256	764	1,104
1922–23	26	1,536	119	7,206	314	694	1,163
1923–24	32	895	5	6,197	276	432	865
1924–25	52	872	205	5,764	488	233	863

2. Comparison with Other Countries.—(i) *Total Yield.* In comparison with the barley production of other countries, that of Australia appears extremely small. Particulars for some of the leading countries during recent years are as follows, the Australian figure being added for the purpose of comparison :—

BARLEY.—PRODUCTION IN VARIOUS COUNTRIES, 1921–24.

Country.	Yield in Bushels (000 omitted).		Country.	Yield in Bushels (000 omitted).	
	Average, 1921–1923.	1924.		Average, 1921–1923.	1924.
United States of America ..	172,554	180,356	Sweden ..	12,034	12,771
Soviet Republics ..	170,113	147,870	Egypt	11,275	10,324
India	130,726	131,578	Bulgaria ..	10,078	7,627
Spain	89,189	80,352	Italy	9,317	8,338
Germany.. ..	86,829	105,818	Argentine Republic	8,222	6,695
Japan	79,537	71,983	Lithuania ..	8,114	8,945
Canada	66,742	85,253	Tunis	7,937	2,425
Rumania.. ..	64,368	29,529	Syria	(*a*)7,045	4,921
Poland	61,376	53,269	Greece	6,602	5,922
United Kingdom ..	48,117	51,296	Latvia	6,172	7,139
Czecho-Slovakia ..	47,618	42,800	Austria	6,059	6,920
France	39,761	46,129	Irish Free State ..	5,911	5,809
Algeria	35,461	17,958	**Australia** ..	**5,870**	**5,066**
Korea	32,695	35,591	Chile	5,012	4,196
French Morocco ..	31,957	51,147	Estonia ..	4,946	5,317
Denmark ..	28,940	32,814	Finland ..	4,624	5,730
Hungary ..	22,258	14,123	Belgium ..	4,076	3,585
Jugo-Slavia ..	12,149	12,939	Norway.. ..	3,854	4,504

(*a*) Year 1922.

(ii) *Yield per Acre.* The following table shows the average yield of barley per acre in various countries of the world, the return ranging from 48.20 bushels in Netherlands to 7.84 bushels in Tunis :—

BARLEY.—AVERAGE YIELD PER ACRE IN VARIOUS COUNTRIES, 1921–1924.

Country.	Yield in Bushels per acre.		Country.	Yield in Bushels per acre.	
	Average, 1921–1923.	1924.		Average, 1921–1923.	1924.
Netherlands ..	48.20	54.52	Hungary ..	19.42	13.48
Belgium ..	46.88	46.02	Lithuania ..	19.26	18.47
Denmark ..	43.75	44.05	Bulgaria ..	18.88	14.50
Irish Free State ..	36.12	33.66	India	18.65	18.32
Chile	34.83	33.73	**Australia** ..	**18.46**	**19.47**
New Zealand ..	34.49	(*c*)34.14	Finland ..	16.81	21.09
United Kingdom ..	31.07	17.69	Italy	16.60	14.57
Sweden	29.66	29.81	Estonia ..	16.17	17.31
Germany.. ..	29.36	29.61	Latvia	15.66	16.13
Egypt	28.93	27.74	Korea	15.62	16.76
Czecho-Slovakia ..	28.70	25.54	Rumania ..	15.10	6.46
Japan	28.14	28.99	Greece	(*a*)14.50	(*c*)17.05
Norway	28.10	33.06	Jugo-Slavia ..	13.29	14.40
Canada	24.48	25.02	Argentine Republic	13.28	9.85
France	23.50	26.13	Algeria ..	12.93	5.69
United States of America ..	22.80	25.45	Soviet Republics	12.76	9.54
Poland	22.35	17.69	French Morocco ..	12.26	16.39
Spain	20.65	18.50	Syria	(*b*)12.14	8.89
Austria	19.91	20.28	Tunis	7.84	3.50

(*a*) Average, years 1919–1921. (*b*) Year 1922. (*c*) Year 1923.

3. **World's Production.**—The world area under barley in 1924 differs but slightly from that of the previous year. Compared with the pre-war period a decline of 8 per cent. has taken place, mainly as the result of a marked decrease in the Soviet Republics. Reduced yields were recorded in 1924 owing to unfavourable weather conditions in Europe where the most important barley-producing countries are situated. The production of barley in millions of bushels from 1909 onwards was as follows :—

Year.	Production.
Average, 1909–1913	1,639 millions of bushels.
1921	1,275 ,,
1922	1,351 ,,
1923	1,489 ,,
1924	1,316 ,,

4. **Price of Barley.**—The average price of barley in the Melbourne market during each of the past five years is given in the following table :—

BARLEY.—AVERAGE MELBOURNE PRICE PER BUSHEL, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Malting barley	7 3	4 5	4 1½	4 0¾	5 8
Cape barley	6 3	3 5	3 0	3 1½	4 7¾

5. **Imports and Exports.**—The Australian export trade in barley has grown considerably in recent years, the average annual shipments during the last five years amounting to 2,135,590 bushels, as compared with an average of 395,220 bushels for the previous quinquennium. The grain was consigned mainly to the United Kingdom and Belgium, South Australia being the principal exporting State. Particulars of the Australian overseas imports and exports for the years 1920–21 to 1924–25 are contained in the following table :—

BARLEY.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1920–21	20	45	3,209,734	778,615	3,209,714	778,570
1921–22	7,052	1,891	1,935,830	396,883	1,928,778	394,992
1922–23	34	18	2,213,184	432,326	2,213,150	432,308
1923 24	4	3	1,828,788	318,912	1,828,784	318,909
1924–25	67,242	16,926	1,490,416	420,432	1,423,174	403,506

In some years there is an export of Australian pearl and Scotch barley, the total for 1924–25 reaching 220,417 lb., valued at £1,740. The trade for the year was mainly with New Zealand and South Africa.

6. **Imports and Exports of Malt.**—In pre-war times the imports of malt into Australia were fairly extensive, the supply being obtained principally from the United Kingdom. Since the outbreak of the war in 1914, however, imports have practically ceased,

and in 1917–18 and 1920–21 fairly large quantities were exported to South Africa and Japan. Details of imports and exports for the years 1920–21 to 1924–25 are given hereunder :—

MALT.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1920–21	5	8	139,908	80.575	139,903	80,567
1921–22	40	43	7,553	3,238	7,513	3,195
1922–23	28	63	4,618	2,006	4,590	1,943
1923–24	28	13	3,573	1,550	3,545	1,537
1924–25	43	29	3,228	1,698	3,185	1,669

7. **Value of Barley Crop.**—The estimated values of the barley crop of Australia for the seasons 1920–21 to 1924–25 were £1,522,915, £1,139,736, £1,220,703, £879,811 and £1,363,656. The extent to which the several States have contributed to the total in 1924–25 is shown in the following table :—

BARLEY.—VALUE OF CROP (*a*), 1924–25.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Total value ..	£32,270	£433,967	£25,511	£823,884	£36,163	£11,861	£1,363,656
Value per acre	£4/17/3	£6/16/1	£2/18/0	£4/19/0	£3/2/4	£3/18/10	£5/4/10

(*a*) Exclusive of the value of straw.

§ 8. Other Grain and Pulse Crops.

In addition to the grain crops already specified, the only other grain and pulse crops extensively grown in Australia are beans, peas, and rye. The total area under the two former crops for the season 1924–25 was 47,895 acres, giving a yield of 771,464 bushels, or an average of 16.11 bushels per acre, being less than the average yield for the decennium ended 1924–25, which was 16.82 bushels per acre. The States in which the greatest area is devoted to beans and peas are Tasmania, Victoria and South Australia. The total area under rye in Australia during the season 1924–25 was 4,337 acres, yielding 52,893 bushels, and giving an average of 12.20 bushels per acre. This was higher than the average for the past ten seasons, which was 11.40 bushels per acre. Over 57 per cent. of the rye grown during the season was produced in New South Wales, and 25 per cent. in Victoria. In addition to these grain crops a small area of rice has for some years been cultivated in Queensland and the Northern Territory, but the results obtained have not up to the present been very satisfactory. The growing of rice on the Murrumbidgee Irrigation area in New South Wales, however, promises to develop into an important industry. In 1924–25 an area of 153 acres was sown in this locality. The acreage increased to 2,200 acres in 1925–26, and further expansion is looked for in the future.

§ 9. Potatoes.

1. **Progress of Cultivation.**—(i) *Area and Yield.* The principal potato-growing State is Victoria, which possesses peculiar advantages for the growth of this tuber. The rainfall is generally satisfactory, while the atmosphere is sufficiently dry to be unfavourable to the spread of Irish blight, consequently potatoes are grown in nearly every district except in the wheat belt. Tasmania comes next in order of importance, followed by New South Wales.

The area and production of potatoes in each State during the last five years are given hereunder :—

POTATOES.—AREA AND YIELD, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia
				AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21 ..	27,667	62,687	8,770	4,811	4,254	32,000	6	140,195
1921–22 ..	29,491	63,895	9,553	5,795	3,612	36,795	3	149,144
1922–23 ..	22,556	61,741	7,649	5,749	3,621	34,407	12	135,735
1923–24 ..	21,850	59,306	6,127	5,239	4,761	37,040	29	134,352
1924–25 ..	23,384	61,295	9,493	3,292	5,122	36,171	19	138,776
				YIELD.				
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1920–21 ..	63,234	171,628	19,068	17,057	13,368	88,679	22	373,056
1921–22 ..	57,825	173,660	16,794	18,573	13,605	107,624	10	388,091
1922–23 ..	35,694	148,354	10,517	17,356	15,198	101,201	32	328,352
1923–24 ..	60,949	238 520	8,878	21,327	17,830	99,936	130	447,570
1924–25 ..	57,179	139,043	20,314	12,226	19,891	83,377	95	332,125

The cultivation of potatoes in Australia has declined by 7,051 acres during the past decennium, due mainly to a decrease in New South Wales of 11,742 acres. In Victoria and Tasmania—the other chief potato-growing areas—increases of 4,924 and 2,789 acres respectively were recorded. The average yield during the last ten years was 346,091 tons, compared with 383,253 tons during the previous decade. The record production of 507,153 tons was obtained in 1907.

(ii) *Average Yield.* The suitability of the soil, climate, and general conditions for potato growing is evidenced by the satisfactory yields per acre which are generally obtained in Australia despite the little attention paid to this crop, the average yield during the past ten seasons being 2.60 tons per acre. The lowest average yield is that obtained in Queensland with an average of 1.84 tons for the same period.

Particulars for each State for the seasons 1920–21 to 1924–25, and also for the past decennium, are given hereunder :—

POTATOES.—YIELD PER ACRE, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1920–21	2.29	2.74	2.17	3.55	3.14	2.77	3.67	2.66
1921–22	1.96	2.72	1.76	3.21	3.77	2.92	3.33	2.60
1922–23	1.58	2.40	1.37	3.02	4.20	2.94	2.67	2.42
1923–24	2.79	4.02	1.45	4.07	3.74	2.70	4.48	3.33
1924–25	2.45	2.27	2.14	3.71	3.88	2.31	5.00	2.39
Averages for 10 seasons 1915–25	2.15	2.78	1.84	3.47	3.34	2.56	3.58	2.60

Concurrent with the decrease in acreage a falling off has occurred in the average yield per acre during the past decennium. This decline was in evidence throughout the principal States, and for Australia as a whole averaged nearly 3 cwt. per acre. In Tasmania, where the decrease was greatest, the average yield diminished by 14 cwt. during the past decade. The comparatively low yield per acre is due to the neglect of rotation, and parsimony in the application of manures. Rotation and manuring are carefully studied in many European countries, with the result that the production per acre is double that obtained in Australia.

(iii) *Relation to Population.* The average annual production of potatoes per head of the population of Australia for the past five seasons was approximately 149 lb. In Tasmania, where this crop is of far greater importance in relation to population than is the case in any other State, the production per head in 1906–7 was nearly a ton, while for the past five seasons it has averaged about 10 cwts. Details for the seasons 1920–21 to 1924–25 are as follows :—

POTATOES.—PRODUCTION PER 1,000 OF POPULATION, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1920–21 ..	30	112	25	35	40	417	11	69
1921–22 ..	27	112	22	37	41	493	5	70
1922–23 ..	16	93	13	34	44	462	13	58
1923–24 ..	28	147	11	41	50	456	50	78
1924–25 ..	25	84	24	23	55	383	32	57

2. **Imports and Exports.**—Under normal conditions there is a moderate export trade in potatoes carried on by Australia principally with New Zealand, the Pacific Islands and the Philippine Islands. On the other hand, when the recurrence of droughts causes

a shortage in some of the States, importations are usually made from New Zealand. The quantities and values of the Australian oversea imports and exports of potatoes during the past five years are shown in the following table :—

POTATOES.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
1920–21	56	746	1,130	13,222	1,074	12,476
1921–22	59	499	2,540	21,611	2,481	21,112
1922–23	72	957	2,061	23,599	1,989	22,642
1923–24	38	639	3,951	29,974	3,913	29,335
1924–25	71	877	5,832	30,283	5,761	29,406

3. **Value of Potato Crop.**—The estimated value of the potato crop of each State for the season 1924–25 is given in the following table, together with value per acre :—

POTATOES.—VALUE OF CROP, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
Total value ..	£419,310	£910,733	£179,440	£117,075	£199,179	£608,652	£700	£2,435,089
Value per acre ..	£17/18/8	£14/17/2	£18/18/1	£35/11/3	£38/17/9	£16/16/7	£36/16/10	£17/10/11

§ 10. Other Root and Tuber Crops.

1. **Nature and Extent.**—Root crops, other than potatoes, are not extensively grown in Australia, the total area devoted to them for the season 1924–25 being only 15,771 acres. The principal of these crops are onions, mangolds, sugar beet, turnips, and " sweet potatoes." Of these, onions, sugar beet and mangolds are most largely grown in Victoria, turnips in Tasmania, and sweet potatoes in Queensland. The total area under onions in Australia during the season 1924–25 was 5,253 acres, giving a yield of 31,553 tons, and averaging 6.01 tons per acre. The area devoted in 1924–25 to root crops other than potatoes and onions, viz., 10,518 acres, yielded 78,493 tons, and gave an average of 7.46 tons per acre. The areas and yields here given are exclusive of the production of " market gardens," reference to which is made further on.

2. **Imports and Exports.**—The only root crop, other than potatoes, in which any considerable oversea trade is carried on by Australia is that of onions. During the past five years 900 tons, valued at £23,192, were imported, principally from the United States of America, New Zealand, and Canada, while during the same period, the exports totalled 29,965 tons, valued at £277,611, and were shipped mainly to New Zealand, the Pacific Islands, the Philippine Islands, and the United States of America.

§ 11. Hay.

1. Nature and Extent.—(i) *Area and Yield.* As already stated, the chief crop in Australia is wheat grown for grain. Next in importance is hay, which for the season 1924–25 averaged 17½ per cent. of the total area cropped. In most European countries the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion is composed of wheat and oats. Large quantities of lucerne hay are made also, particularly in New South Wales and Queensland. The area under hay of all kinds in the several States during the last five years is given hereunder. The progress from 1860 onwards may be traced from the graph accompanying this chapter.

HAY.—AREA AND YIELD, 1920-21 TO 1924-25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter	Fed. Cap. Ter.	Australia.
					AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21	853,109	1,333,397	94,212	570,865	266,824	113,618	10	1,154	3,233,189
1921–22	749,738	1,159,135	98,155	559,285	335,561	91,443	12	1,190	2,994,519
1922–23	888.250	1,261,408	78,050	577,810	431,633	100,088	10	1,207	3,338,456
1923–24	1,022,118	1,277,606	46,909	631,267	329,534	97,183	10	1,599	3,406,226
1924–25	762,242	1,120,312	95,007	562,253	397,591	87,945	10	1,045	3,026,405
					YIELD.				
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1920–21	1,372,801	1,984,854	116,709	769,050	264,244	176,798	20	1,855	4,686,331
1921–22	1,027,833	1,548,453	138,675	680,201	368,720	136,991	25	1,291	3,902,189
1922–23	1,059,529	1,665,089	101,069	697,189	457,371	167,282	10	1,450	4,148,989
1923–24	1,170,737	1,541,287	43,407	781,768	368,122	144,298	5	2,310	4,051,934
1924–25	1,151,238	1,492,588	136,804	716,749	448,525	121,110	30	1,375	4,068,419

In all the States marked fluctuations occur yearly in the area under hay. These fluctuations are due to various causes, the principal being the variations in the relative prices of grain and hay, and the favourableness or otherwise of the season for a grain crop. Thus, crops originally sown for grain are frequently cut for hay owing to the improved price of that commodity, or owing to the fact that the outlook for grain is not satisfactory. On the other hand, improved grain prices or the prospect of a heavy yield will frequently cause crops originally intended for hay to be left for grain. The area under hay in Australia during the season 1915–16, *i.e.*, 3,597,771 acres, was the highest on record, whilst the average during the past decennium amounted to 3,029,990 acres.

(ii) *Average Yield.* The States in which the highest average yields per acre have been obtained during the last decennium are Tasmania, Queensland and Victoria, in the two former of which States also the smallest areas are devoted to this crop. For the same period the lowest yield for Australia as a whole was that of 19 cwt. per acre in 1919–20; while the highest was that of 31½ cwt. in 1915–16, followed closely by 29 cwt.

obtained in 1920–21. The average for the decennium was 25½ cwt. Particulars for the several States for the seasons 1920–21 to 1924–25, and the average for the last ten years, are given hereunder :—

HAY.—YIELD PER ACRE, 1920–21 TO 1924–25.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1920–21	1.61	1.49	1.24	1.35	0.99	1.56	2.00	1.61	1.45
1921–22	1.37	1.34	1.41	1.22	1.10	1.50	2.08	1.08	1.30
1922–23	1.19	1.32	1.29	1.21	1.06	1.67	1.00	1.20	1.24
1923–24	1.15	1.21	0.93	1.24	1.12	1.48	0.50	1.44	1.19
1924–25	1.51	1.33	1.44	1.27	1.13	1.38	3.00	1.32	1.34
Average for 10 seasons 1915–1925 ..	1.24	1.35	1.31	1.25	1.10	1.45	2.80	1.54	1.27

(iii) *Relation to Population.* During the past five seasons the Australian hay production per head of population has varied between 14 cwt. in 1923–24 and 17⅓ cwt. in 1920–21; averaging over 14¾ cwt. per head for the period. Hay production per head of population is highest in South Australia. Details for the seasons 1920–21 to 1924–25 are given hereunder :—

HAY.—YIELD PER 1,000 OF POPULATION, 1920–21 TO 1924–25.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1920–21 ..	657	873	155	1,566	799	831	5	941	866
1921–22 ..	483	998	180	1,353	1,100	627	7	625	708
1922–23 ..	488	1,047	128	1,359	1,331	764	3	567	737
1923–24 ..	530	948	54	1,490	1,040	659	1	881	705
1924–25 ..	511	901	163	1,331	1,231	556	8	459	693

(iv) *Varieties Grown.* Particulars concerning the kinds of crop cut for hay are furnished in the returns prepared by five of the States. In the case of Tasmania the bulk consists of oaten hay; full particulars, however, are not available for that State.

Details for the past five seasons are given in the following table :—

HAY.—VARIETIES GROWN, 1920–21 TO 1924–25.

Varieties.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
NEW SOUTH WALES—					
	Acres.	Acres.	Acres.	Acres.	Acres.
Wheaten	520,417	467,068	597,959	695,369	388,422
Oaten	259,022	203,074	216,136	241,161	274,408
Barley	1,832	899	1,265	1,584	1,150
Lucerne	70,995	77,527	72,337	83,256	97,994
Other	843	1,170	553	748	268
Total	853,109	749,738	888,250	1,022,118	762,242

HAY.—VARIETIES GROWN, 1920–21 TO 1924–25—*continued.*

Varieties.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	Acres.	Acres.	Acres.	Acres.	Acres.
VICTORIA—					
Wheaten	165,502	130,181	213,219	163,826	87,312
Oaten	1,140,578	1,001,256	1,021,216	1,084,136	1,000,382
Lucerne, etc.	27,317	27,698	26,973	29,644	32,618
Total ..	1,333,397	1,159,135	1,261,408	1,277,606	1,120,312
QUEENSLAND—					
Wheaten	14,024	13,837	8,834	8,714	9,457
Oaten	19,229	12,480	4,542	1,344	8,304
Lucerne	53,059	67,183	60,042	33,505	61,089
Other..	7,900	4,655	4,632	3,346	16,157
Total ..	94,212	98,155	78,050	46,909	95,007
SOUTH AUSTRALIA—					
Wheaten	329,543	325,769	359,834	381,962	304,183
Oaten	231,446	225,878	208,769	234,899	246,825
Lucerne	3,938	4,145	4,973	7,270	8,344
Other..	5,938	3,493	4,234	7,136	2,901
Total ..	570,865	559,285	577,810	631,267	562,253
WESTERN AUSTRALIA—					
Wheaten	169,264	222,209	307,142	223,770	242,216
Oaten	96,228	111,386	123,232	103,723	153,315
Lucerne	146	125	142	175	339
Other..	1,186	1,841	1,117	1,866	1,721
Total ..	266,824	335,561	431,633	329,534	397,591

Wheaten hay is the principal hay crop in New South Wales, South Australia, and Western Australia, oaten hay in Victoria and Tasmania, and lucerne in Queensland.

2. **Comparison with Other Countries.**—As already noted, the hay crops of most European countries consist of grasses of various kinds, amongst which clover, lucerne, sainfoin and rye grass occupy prominent places. The statistics of hay production in these countries are not prepared on a uniform basis, consequently any attempt to furnish extensive comparisons would be misleading. It may be noted, however, that in Great Britain the production of hay from clover, sainfoin, etc., for the year 1925 amounted to 3,209,000 tons from 2,125,000 acres, while from permanent grasses a yield of 4,783,000 tons of hay was obtained from 4,468,000 acres, giving a total of 7,992,000 tons from 6,593,000 acres, or about 24 cwt. per acre.

3. **Imports and Exports.**—Under normal conditions hay, whether whole or in the form of chaff, is somewhat bulky for oversea trade, and consequently does not in such circumstances figure largely amongst the imports and exports of Australia. During 1924–25, 157 tons were imported, while the exports amounted to 13,934 tons, valued at £79,242, the principal purchases being made by New Zealand, India, the Philippine Islands, and Malaya (British).

4. **Value of Hay Crop.**—The following table shows the value and the value per acre of the hay crop of the several States for the season 1924–25 :—

HAY.—VALUE OF CROP, 1924–25.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£	£
Total Value ..	8,467,030	4,477,764	854,327	2,168,165	1,969,902	544,995	120	10,460	18,492,763
Value per acre	£11/2/2	£3/19/11	£8/19/10	£3/17/1	£4/19/1	£6/3/11	£12/0/0	£10/0/3	£6/2/2

§ 12. Green Forage.

1. **Nature and Extent.**—(i) *Area.* In all the States a considerable area is devoted to the production of green forage, mainly in connexion with the dairying industry. The total area so cropped is considerably swollen in adverse seasons by the inclusion of wheat or other cereal crops deemed unsuitable for the production of either grain or hay. Under normal conditions the principal crops cut for green forage are maize, sorghum, oats, barley, rye, rape, and lucerne, while small quantities of sugar-cane also are so used. Particulars concerning the area under green forage in the several States during each of the last five years are given in the following table :—

GREEN FORAGE.—AREA, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21	112,003	79,524	142,554	40,678	26,620	5,575	..	..	406,954
1921–22	128,965	89,410	147,135	50,121	27,396	9,481	..	..	452,508
1922–23	499,679	102,451	188,636	61,000	32,997	9,073	..	35	893,871
1923–24	429,765	107,371	306,693	55,282	51,754	10,389	50	7	961,311
1924–25	166,030	99,531	134,109	73,023	78,586	13,602	..	43	564,924

(ii) *Relation to Population.* Particulars of the area under green forage per 1,000 of the population for the seasons 1920–21 to 1924–25 are given hereunder :—

GREEN FORAGE.—AREA PER 1,000 OF POPULATION, 1920–21 TO 1924–25.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21 ..	54	52	190	83	80	26	..	..	75
1921–22 ..	61	58	191	100	82	43	..	..	82
1922–23 ..	230	64	239	119	96	41	..	14	159
1923–24 ..	195	66	378	105	146	47	14	3	167
1924–25 ..	74	60	161	136	216	62	..	14	96

2. **Value of Green Forage Crops.**—The value of these crops is variously estimated in the several States, and the Australian total for the season 1924–25 may be taken approximately as £2,309,322 or about £4 1s. 9d. per acre.

§ 13. Sugar-cane and Sugar-beet.

1. Sugar-cane.—(i) *Area.* Sugar-cane for sugar-making purposes is grown only in Queensland and New South Wales, and much more extensively in the former than in the latter. Thus, of a total area of 273,512 acres under sugar-cane in Australia for the season 1924–25, there were 253,519 acres, or about 92½ per cent., in Queensland. Sugar-cane growing appears to have been started in Australia in or about 1862, as the earliest statistical record of sugar-cane as a crop is that which credits Queensland with an area of 20 acres for the season 1862–3. In the following season the New South Wales returns show an area of 2 acres under this crop. The area under cane in New South Wales reached its maximum in 1895–6 with a total of 32,927 acres. Thenceforward with slight variations it gradually fell to 10,490 acres in 1918–19, but from that year onwards considerable improvement has taken place, some 9,500 acres being added to the cane-fields during the past five years. In Queensland, although fluctuations in area are manifest, the general trend has been upwards, the acreage under cane for the season 1924–25 being the highest on record. The area under sugar-cane in Australia from 1920–21 is given in the following table, and particulars for earlier years may be seen from the accompanying graphs :—

SUGAR-CANE.—AREA, 1920–21 TO 1924–25.

Season.	New South Wales.		Queensland.		Australia.		
	Productive.	Unproductive.	Productive.	Unproductive.	Productive.	Unproductive.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21 ..	5,519	5,863	89,142	73,477	94,661	79,340	174,001
1921–22 ..	5,400	7,380	122,956	61,557	128,356	68,937	197,293
1922–23 ..	5,879	8,704	140,850	61,453	146,729	70,157	216,886
1923–24 ..	6,733	10,582	138,742	81,223	145,475	91,805	237,280
1924–25 ..	7,761	12,232	167,649	85,870	175,410	98,102	273,512

(ii) *Productive and Unproductive Cane.* The areas given in the preceding table represent sugar-cane grown for purposes other than green forage. The whole area was not necessarily cut for crushing during any one season, there being always a considerable amount of young and " stand over " cane, as well as a small quantity required for plants. The season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing, as was evidenced in 1923–24, when, although the total acreage was greater, the area cut was less than in the previous year.

(iii) *Yield of Cane and Sugar.* Queensland statistics of the production of sugar-cane are not available for dates prior to the season 1897–8. In that season the total for Australia was 1,073,883 tons, as against the maximum production of 3,400,319 tons in 1924–25. The second highest yield was in the season 1917–18, with a total of 2,879,092 tons. The average production of cane during the decennium ended 1924–25 was 2,084,442 tons. The three highest yields of sugar were in 1924–25, 1917–18 and 1922–23, the quantities being 435,818 tons, 327,589 tons, and 306,365 tons respectively. The decennial average was 255,772 tons of sugar. Particulars relative to the total yields of cane and sugar for the past five years are as follows :—

SUGAR-CANE.—YIELD OF CANE AND SUGAR, 1920–21 TO 1924–25.

Season.	New South Wales.		Queensland.		Australia.	
	Cane.	Sugar.	Cane.	Sugar.	Cane.	Sugar.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1920–21 ..	131,313	15,124	1,339,455	167,401	1,470,768	182,525
1921–22 ..	149,474	17,806	2,287,416	282,198	2,436,890	300,004
1922–23 ..	147,992	18,580	2,167,990	287,785	2,315,982	306,365
1923–24 ..	132,084	16,829	2,045,808	269,175	2,177,892	286,004
1924–25 ..	228,978	26,682	3,171,341	409,136	3,400,319	435,818

The cane cut in 1925 was approximately 4,030,000 tons. The season proved extremely favourable, and the sugar content of the cane was high, with the result that the production of sugar in 1924, which had been the highest recorded, was exceeded by 80,000 tons, the total for 1925 amounting to 519,327 tons. In accordance with the agreement made by the Commonwealth Government respecting the yields for the three years 1920, 1921, and 1922, the sugar industry progressed considerably. The guaranteed price induced mill-owners to make considerable additions to plant, thereby increasing the efficiency of the mills, while farmers in nearly every district put new areas under cane, using in many cases land that had lain unproductive for years.

A preliminary estimate of the production of sugar in 1926 places the amount at 400,000 tons.

Large quantities of molasses are produced as a by-product in the sugar mills, but, at present, much of it is allowed to run to waste. Details for a series of years of the quantity produced and the proportions used for distilling, fuel, manure and other purposes will be found in Chapter XXII.—" Manufacturing."

Keen interest has recently been aroused in the utilization of the by-products of sugar manufacture. It is proposed to erect at the Plane Creek Central Sugar Mill a distillery for dealing with molasses, and to grow cassava, for the purpose of making power alcohol. Another proposal is to utilize sugar-cane and molasses for power alcohol manufacture. Steps are at present being taken to launch an industry to undertake the manufacture of a building material known as "megass board" from megass or bagasse, i.e., the residuum of crushed fibre left over from the sugar cane after the removal of the sugar content. The Australian megass board is claimed to possess superior qualities to the "celotex" made from bagasse in America.

(iv) *Average Yield of Cane and Sugar.* The average yield per acre of productive cane is much higher in New South Wales than in Queensland, the average during the last decade being 25.42 tons for the former and 17.08 for the latter State. For some years prior to 1910–11, the yield in New South Wales remained practically constant at about 21 tons per acre. Since that year, the average yield per acre has shown an upward tendency, reaching 30 tons or over during 1913–14, 1914–15, and 1917–18. The climatic conditions affecting the long coastal area where this industry is situated in Queensland are largely responsible for the great variations in the yields of sugar for that State, the figures ranging during the past decennium from 12.20 tons per acre in 1915–16 to 24.88 tons in 1917–18.

The greatest production of sugar per acre crushed during the past decennium occurred in 1917–18, when 2.87 tons were obtained, the respective crushings for New South Wales and Queensland averaging 3.56 and 2.83 tons. The average yield per acre for the past ten years was 3.01 tons in New South Wales, and 2.10 tons in Queensland.

(v) *Quality of Cane.* The quantity of cane required to produce a ton of sugar varies not only with the district in which the cane is grown, but also with the season, and for the decennium ended 1924–25 averaged 8.15 tons, the average production of sugar being 12.27 per cent. of the weight of cane crushed. The systematic study of beet culture in European countries has shown that by suitable methods the sugar contents of the root can be greatly increased, and it is believed that a similar improvement can be effected in the yield from sugar-cane.

SUGAR-CANE AND SUGAR.—YIELD PER ACRE, 1920–21 TO 1924–25.

Season.	New South Wales.			Queensland.			Australia.		
	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1920–21	23.79	2.74	8.68	15.03	1.88	8.00	15.54	1.93	8.06
1921–22	27.68	3.30	8.40	18.60	2.30	8.11	18.99	2.34	8.12
1922–23	25.17	3.16	7.97	15.89	2.04	7.53	15.78	2.09	7.56
1923–24	19.62	2.50	7.85	14.75	1.94	7.60	14.97	1.97	7.60
1924–25	29.50	3.44	8.58	18.92	2.39	7.92	19.38	2.44	7.96
Average 10 seasons 1915–25 ..	25.42	3.01	8.44	17.08	2.10	8.13	17.48	2.15	8.15

The Bureau of Sugar Experiment Stations established in Queensland is rendering excellent service to the sugar industry in that State, by advocating and demonstrating better methods of cultivation, the use of green manures, lime, and fertilizers, together with the introduction and distribution of improved varieties of sugar cane.

A machine was used with considerable success during portion of the 1924 season for cane cutting in burnt cane in the Bundaberg district. Improvements in cultivating machinery, moreover, are continually being made, and the use of tractors is universal in the sugar districts of North Queensland.

(vi) *Relation to Population.* The yield of sugar in Australia during the five years 1920–21 to 1924–25 was just sufficient to supply local requirements, the average production during the period amounting to 119 lbs. per head of population, while the consumption was estimated to average 117 lbs. per head. Details for the period 1920–21 to 1924–25 are as follows :—

SUGAR.—PRODUCTION PER HEAD OF POPULATION, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales ..	16	19	19	17	27
Queensland	498	821	818	743	1,098
Australia	76	122	122	111	166

2. **Sugar-beet.**—(i) *Area and Yield.* The following table shows the acreage under sugar-beet, and the production in Victoria during the past five seasons :—

SUGAR-BEET.—AREA AND PRODUCTION IN VICTORIA, 1920-21 TO 1924–25.

Particulars.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Area harvested ..	acres	1,180	1,600	2,045	1,937	1,897
Production ..	tons	7,147	16,577	20,444	29,512	24,468
Average per acre	,,	6.06	10.36	10.00	15.24	12.90
Sugar produced ..	,,	833	1,872	2,784	3,499	3,017

The 1924–25 season was a normal one. Growers were paid 40s. a ton for their beets, and a profit of £23,142 was realized by the sugar-beet factory as the result of the year's operations.

(ii) *Encouragement of Beet-growing.* During recent years an effort has been made to revive the sugar-beet industry in Victoria. The State Government has advanced its irrigation scheme on the Macalister River to provide water for part of the district for the present season and eventually to serve the whole area. A sum of £65,000 was provided for remodelling the plant at the Maffra factory and the work is being pushed forward rapidly. A fine grade of white sugar is manufactured at Maffra, and considerable quantities of beet pulp and molasses are distributed for stock feed.

3. **Sugar Bounties.**—The provision of bounties or similar aids to the sugar growers of Australia early occupied the attention of the Commonwealth Parliament, the object in view being that of assisting the industry, and at the same time diminishing the employment of coloured labour in connexion therewith. An account of the various Acts in connexion with sugar bounties and sugar excise tariffs will be found on pages 394 to 396 of Year Book No. 6. In 1912 the Sugar Excise Repeal Act and the Sugar Bounty Abolition Act were passed by the Federal Parliament, conditionally on the Queensland Parliament approving of legislation prohibiting the employment of coloured labour in connexion with the industry. The State Sugar Cultivation Act, the Sugar Growers Act, and the Sugar Growers' Employees Act of 1913, having been approved of, the 1912 Federal Acts, which repeal all previous enactments in regard to excise on sugar and bounty on cane, came into force by proclamation in July, 1913.

4. **Sugar Purchase by Commonwealth Government.**—The steps taken by the Commonwealth Government in connexion with this matter were alluded to in previous issues of the Year Book. (See No. 18, p. 720.)

By agreement between the Commonwealth and Queensland Governments in 1925, it was arranged that the embargo on the importation of foreign sugar should be extended for three years from 1st September, 1925. It was estimated that 60 per cent. of the production in 1925 would be required for home consumption, leaving the remaining 40 per cent. to be exported. The price payable for the raw sugar needed for home consumption was fixed at £27 per ton, less £1 per ton to defray administrative and general expenses of the Sugar Board, and to provide special concessions to certain consumers of sugar, while for that portion reserved for export the price was fixed at £9 10s. per ton, subject to realization adjustments. Final calculations by the Sugar Board showed that 56 per cent. of the total production in 1925–26 was consumed in Australia, while the net value per ton of exported sugar was £11 5s. 9d., making the average price for the whole crop £19 10s. 7d. per ton.

In view of the decrease in production in 1926–27 it has been assumed that 70 per cent. of the sugar can be paid for on the basis of the fixed Australian price, and 30 per cent. on net return from exported sugar. Should this anticipation prove correct, the net average price over the whole crop will amount to about £21 per ton.

5. **Imports and Exports of Sugar.**—Owing to the increased production of sugar in Australia during the past four years the imports have dwindled to insignificant proportions. Supplies to make up for local deficiencies are usually drawn from Java and Fiji. Particulars concerning the imports and exports of cane sugar for the past five years are as follows :—

CANE SUGAR.—IMPORTS AND EXPORTS, AUSTRALIA, 1920-21 TO 1924–25.

Year.	Oversea Imports.		Oversea Exports.		Net Imports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
1920–21	116,274	6,560,373	4,190	220,965	112,084	6,339,408
1921–22	6,888	174,850	1,918	60,145	4,970	114,705
1922–23	4,551	87,317	5,127	159,897	−576	−72,580
1923–24	525	12,200	15,591	443,183	−15,066	−430,983
1924–25	3,046	65,579	82,747	2,162,309	−79,701	−2,096,730

Note.—The minus sign (−) signifies net exports.

§ 14. Vineyards.

1. **Progress of Cultivation.**—(i) *Area of Vineyards.* The date of introduction of the vine into Australia has been variously set down by different investigators, the years 1815 and 1828 being principally favoured. It would seem, however, that plants were brought out with the first fleet in 1788, consequently the Australian vine is as old as Australian settlement. As already mentioned, a report by Governor Hunter gives the area under vines in 1797 as 8 acres. From New South Wales the cultivation spread to Victoria and South Australia, and these States have now far outstripped the mother State in the area under this crop. In Queensland and Western Australia also, vine-growing has been carried on for many years, but little progress has been made. In Tasmania the climate is not favourable to the growth of grapes. The purposes for which grapes are grown in Australia are three in number, viz. :—(*a*) for wine-making, (*b*) for table use, and (*c*) for drying. The total area under vines in the several States during each of the last five years is given in the following table, while particulars from 1860 onwards may be gathered from the graph accompanying this chapter :—

VINEYARDS.—AREA, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21	10,783	29,255	1,256	36,661	3,210	There are no vineyards in Tasmania.	81,165
1921–22	12,583	33,175	1,281	41,424	3,951		92,414
1922–23	13,734	38,892	1,242	46,750	4,858		105,476
1923–24	14,559	42,599	1,269	49,303	5,235		112,965
1924–25	14,737	42,467	1,579	50,280	5,331		114,394

The area under vines in Australia amounted to 65,673 acres in 1904–5. From that year onwards a gradual decline set in, and at the end of 1914–15 the acreage had decreased to 60,985. Since that date, however, as the result of satisfactory annual increases, the 1904–5 figure was soon exceeded, and the total for 1924–25 was the highest on record.

The wine-growing industry in Australia, especially in Victoria and New South Wales, received a severe check by various outbreaks of phylloxera. With a view to the eradication of this disease extensive uprooting of vineyards in the infested areas was undertaken, while further planting within such areas, except with phylloxera-resistant stocks, was prohibited.

(ii) *Wine Production.* The production of wine has not increased as rapidly as the suitability of soil and climate would appear to warrant. The cause is probably twofold, being due in the first place to the fact that Australians are not a wine-drinking people, and consequently do not provide a local market for the product, and in the second, to the fact that the new and comparatively unknown wines of Australia find it difficult to establish a footing in the markets of the old world, owing to the competition of well-known brands. Active steps are being taken in various ways to bring the Australian wines under notice, and it may be confidently expected that when their qualities are duly recognized, the wine production of Australia will increase. Particulars of the quantity of wine produced in the several States during the past five seasons are given in the table hereunder :—

WINE.—PRODUCTION, 1920–21 TO 1924–25.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.		Gallons.
1920–21 ..	674,188	2,222,305	71,403	7,893,345	152,979	No production of wine in Tasmania.	11,014,220
1921–22 ..	627,105	1,335,066	57,793	6,370,310	152,299		8,542,573
1922–23 ..	771,206	1,717,490	53,171	8,653,579	232,347		11,427,793
1923–24 ..	1,459,778	2,177,127	37,242	10,756,538	233,196		14,663,881
1924–25 ..	1,171,264	1,368,765	33,119	10,502,381	223,761		13,299,290

(iii) *Relation to Population.* In relation to population the areas of the vineyards of the several States show an upward tendency during the last five years, the Australian total increasing from 15 to 19 acres per 1,000 of the population during the period. Details for the seasons 1920–21 to 1924–25 are given in the succeeding table :—

VINEYARDS.—AREA PER 1,000 OF POPULATION, 1920–21 TO 1924–25.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21 ..	5	19	2	75	10	..	15
1921–22 ..	6	21	2	82	12	..	17
1922–23 ..	6	24	2	91	14	..	19
1923–24 ..	7	26	2	94	15	..	20
1924–25 ..	7	26	2	93	15	..	19

2. **Imports and Exports of Wine.**—(i) *Imports.* The principal countries of origin of wine imported into Australia are France, Spain, Portugal, and Italy, the bulk of the sparkling wines coming from France. Particulars relative to the importations of wine into Australia during the past five years are given hereunder :—

WINE.—IMPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Quantity.			Value.		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£	£	£
1920–21 ..	39,665	63,824	103,489	135,169	58,248	193,417
1921–22 ..	7,398	37,814	45,212	20,781	35,830	56,611
1922–23 ..	15,368	43,199	58,567	41,305	32,692	73,997
1923–24 ..	21,770	54,988	76,758	56,069	38,434	94,503
1924–25 ..	28,324	52,999	81,323	72,042	33,743	105,785

(ii) *Exports.* The principal countries to which wine is exported from Australia are the United Kingdom and New Zealand, a small but fairly regular export trade being also carried on with India, Ceylon, and the Pacific Islands. Details concerning the exports of wine from Australia during the past five years are given in the following table :—

WINE.—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Quantity.			Value.		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£	£	£
1920–21 ..	9,669	1,098,678	1,108,347	19,105	291,856	310,961
1921–22 ..	2,177	602,853	605,030	5,451	155,487	160,938
1922–23 ..	2,607	703,710	706,317	5,626	159,368	164,994
1923–24 ..	3,601	987,703	991,304	7,180	210,132	217,312
1924–25 ..	4,003	877,466	881,469	8,304	180,387	188,691

3. **Other Viticultural Products.**—(i) *Table Grapes.* In addition to grapes for wine-making purposes, large quantities are grown in all the States for table use, while, particularly in Victoria and South Australia, the drying of raisins and currants is extensively carried on. The quantities of table grapes grown in the several States during the past five seasons are as follows :—

TABLE GRAPES.—PRODUCTION, 1920–21 TO 1924–25.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1920–21 ..	2,660	2,471	649	955	2,088	..	8,823
1921–22 ..	2,914	3,075	602	1,027	1,894	..	9,512
1922–23 ..	3,513	3,304	570	1,314	2,344	..	11,045
1923–24 ..	3,983	2,726	1,038	1,056	2,662	..	11,465
1924–25 ..	3,590	2,672	961	1,156	2,069	..	10,448

(ii) *Raisins and Currants.* Statistics of the quantities of raisins and currants dried during each of the past five seasons are given in the following table :—

RAISINS AND CURRANTS.—QUANTITIES DRIED, 1920–21 TO 1924–25.

Season.	N.S. Wales.		Victoria.		South Aust.		Western Aust.		Australia.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.
1920–21 ..	4,448	2,469	116,887	62,919	39,534	65,307	7,308	5,856	168,177	136,551
1921–22 ..	6,696	4,189	190,451	75,042	66,083	76,534	6,790	6,371	270,020	162,136
1922–23 ..	11,253	5,768	285,520	98,081	69,261	96,807	6,748	9,250	372,782	209,906
1923–24 ..	16,967	6,658	438,827	150,867	125,006	131,000	9,606	15,769	590,406	304,294
1924–25 ..	19,180	5,953	366,999	104,948	139,385	109,446	7,940	12,689	533,504	233,036
Average 10 seasons 1915–25	8,241	3,655	217,303	80,656	66,518	78,791	4,801	6,210	296,863	169,312

4. Imports and Exports of Raisins and Currants. The following table gives the oversea imports and exports of raisins and currants during each of the past five years :

RAISINS AND CURRANTS.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
			RAISINS.			
	lbs.	£	lbs.	£	lbs.	£
1920–21 ..	14,997	1,366	11,816,126	520,293	11,801,129	518,927
1921–22 ..	219,499	12,021	13,206,052	550,838	12,986,553	538,817
1922–23 ..	81,018	5,292	19,240,729	721,641	19,159,711	716,349
1923–24 ..	433,907	8,137	26,399,830	803,365	25,965,923	795,228
1924–25 ..	193,372	8,682	56,046,855	1,392,566	55,853,483	1,383,884
			CURRANTS.			
1920–21 ..	3,573	300	5,994,580	208,743	5,991,007	208,443
1921–22 ..	3,577	102	10,941,175	344,238	10,937,598	344,136
1922–23 ..	3,236	90	14,502,772	404,184	14,499,536	404,094
1923–24 ..	4,267	178	16,458,561	420,380	16,454,294	420,202
1924–25 ..	7,852	231	21,558,804	509,179	21,550,952	508,948

The quantities of raisins and currants imported into Australia were generally greater than the exports for all years prior to 1912, when the increased production in Australia left a surplus available for export. During the last five years the value of the exports exceeded that of the imports by £5,839,028, the average annual excess for the quinquennium being £1,167,806.

§ 15. Orchards and Fruit Gardens.

1. Progress of Cultivation.—(i) *Area.* Fruit-growing has made rapid progress in Australia during recent years, the area devoted thereto having increased in the past ten years by nearly 45,000 acres. The falling-off in acreage since 1921–22 was brought about by unsatisfactory marketing of the surplus production, a condition of affairs which is being remedied. The States in which the decennial increase is most marked are :—New South Wales, 20,067 acres ; Victoria, 11,056 acres ; and Queensland, 9,526 acres. During the same period the South Australian fruit-growing area increased by 7,508 acres, while in Western Australia and Tasmania decreases of 2,858 and 1,015 acres respectively were recorded since 1914–15. The total area under orchards and fruit gardens in the several States is given in the following table :—

ORCHARDS AND FRUIT GARDENS.—AREA, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21 ..	75,904	87,768	26,927	31,364	19,570	37,013	5	278,551
1921–22 ..	75,746	89,491	28,035	32,295	19,012	36,565	5	281,149
1922–23 ..	73,134	86,014	29,431	33,003	19,405	34,689	11	275,687
1923–24 ..	72,372	85,570	29,568	33,472	18,776	34,076	11	273,845
1924–25 ..	73,972	85,358	31,738	33,319	18,520	33,992	5	276,904

(ii) *Varieties and Yield.* The varieties grown differ in various parts of the States, ranging from such fruits as the pineapple, paw-paw, mango, and guava of the tropics to the strawberry, the raspberry, and the currant of the colder parts of the temperate zone. The principal varieties grown in Victoria are the apple, peach, pear, plum, orange, and apricot. In New South Wales, citrus fruits (oranges, lemons, etc.) occupy the leading position, although apples, peaches, plums, pears, cherries and bananas are extensively grown. In Queensland, the banana, the apple, the orange, the pineapple, the peach, the plum, and the coconut are the varieties most largely cultivated. In South Australia, in addition to the apple, orange, apricot, peach, plum, and pear, the almond and the olive are extensively grown. In Western Australia, the apple, orange, pear, peach, plum, apricot and fig are the chief varieties. In Tasmania, the apple occupies nearly four-fifths of the fruit growing area, but small fruits, such as the currant, raspberry, and gooseberry are extensively grown, while the balance of the area is taken up with the pear, apricot, plum, and cherry. The following table gives the acreage under the principal kinds of fruit, and the quantity and value of fruit produced. The acreages are exclusive of young trees not yet bearing. Although statistics of area are not collected annually in Victoria, the acreage under each class of fruit is estimated from data based on the triennial collection of the number of trees, subject to annual variations in the total area under orchards and fruit gardens :—

ORCHARDS AND FRUIT GARDENS.—VARIETIES AND YIELD, 1924–25.

Fruit.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
Apples	.. acres	9,043	27,837	2,331	9,414	7,628	25,658	5	81,916
	bushels	841,429	2,233,230	98,644	597,375	656,881	2,210,000	900	6,638,459
	£	362,600	651,359	65,763	219,364	322,966	756,800	395	2,379,247
Apricots	.. acres	1,551	4,222	91	2,825	534	1,516	..	10,739
	bushels	169,619	350,778	2,713	285,797	37,899	105,979	..	952,785
	£	49,610	114,003	2,057	87,500	25,858	20,950	..	299,978
Bananas	.. acres	1,002	..	13,491	..	5	..	..	14,498
	bushels	91,144	..	1,847,837	..	395	..	..	1,939,376
	£	60,760	..	769,932	..	593	..	..	831,285
Cherries	.. acres	2,029	2,202	7	680	..	82	..	5,000
	bushels	93,411	51,299	670	26,336	..	2,369	6	174,091
	£	109,290	46,169	564	19,094	..	950	7	176,074
Lemons	.. acres	2,368	1,182	268	413	441	..	..	4,672
	bushels	276,485	95,443	20,733	46,647	58,421	..	..	497,729
	£	65,010	38,177	10,712	12,828	24,768	..	..	151,495
Nectarines and Peaches	acres	7,228	9,599	2,100	2,833	897	65	..	22,722
	bshls	818,613	1,007,228	102,613	204,808	56,379	4,464	45	2,194,150
	£	262,410	289,785	58,423	59,859	37,965	890	18	709,350
Nuts	.. acres	254	345	..	1,640	..	..	..	2,239
	lbs.	104,968	108,500	..	985,376	..	..	..	1,198,844
	£	4,218	4,057	..	38,352	..	..	..	46,627
Oranges	.. acres	20,238	3,280	2,609	3,770	2,527	..	..	32,424
	bushels	2,005,399	210,595	262,791	362,497	222,979	..	..	3,064,261
	£	779,190	105,298	118,256	144,999	146,545	..	..	1,294,288
Pineapples	acres	51	..	3,709	..	..	..	..	3,760
	dozen	4,803	..	973,457	..	..	..	..	978,260
	£	2,400	..	267,701	..	..	..	..	270,101
Pears	.. acres	3,035	8,825	275	1,947	1,037	1,920	..	17,039
	bushels	280,144	910,915	8,019	172,033	88,858	172,298	..	1,632,267
	£	85,540	189,774	6,816	47,246	29,249	44,700	..	403,325
Plums	.. acres	3,620	4,454	1,145	1,980	690	593	..	12,482
	bushels	328,602	308,638	39,107	142,727	49,810	44,136	..	913,020
	£	119,640	61,728	27,701	40,985	29,056	4,230	..	283,340
Small fruits	acres	17	987	177	304	79	2,284	..	3,848
	cwts.	2,324	21,137	3,355	6,809	593	74,344	..	108,562
	£	6,000	57,442	53,120	13,990	3,671	105,700	..	239,923
Other fruits	acres	1,029	3,368	2,185	969	628	67	..	8,246
	£	80,162	135,913	70,019	23,833	21,356	1,020	..	332,303
Total	.. acres	51,465	66,301	28,388	26,775	14,466	32,185	5	219,585
	£	1,986,830	1,693,705	1,451,064	708,050	642,027	935,240	420	7,417,336

(iii) *Relation to Population.* The acreage of the orchards and fruit gardens of Australia in relation to population has shown a tendency to decrease during the past five years. The Australian figure for 1924–25 amounted to .047 acres per head, whilst the range amongst the States varied from .033 in New South Wales to .156 acres in Tasmania. Details for orchards and fruit gardens for the years 1920–21 to 1924–25 are as follows :—

ORCHARDS AND FRUIT GARDENS.—AREA PER 1,000 OF POPULATION, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres	Acres.	Acres.	Acres.
1920–21 ..	36	57	36	64	59	174	..	3	51
1921–22 ..	36	58	36	64	57	167	..	2	51
1922–23 ..	34	54	37	64	56	158	..	4	49
1923–24 ..	33	53	37	64	53	156	..	4	48
1924–25 ..	33	52	38	62	51	156	..	2	47

2. **Imports and Exports of Fruit.**—(i) *General.* A considerable export trade in both fresh and dried fruits is carried on by Australia with oversea countries. The import trade in fresh fruits declined heavily during the past four years, owing to the imposition of a Customs duty of 1d. per lb. on imported bananas, which had hitherto been the chief item of fresh fruit imported into Australia, while the imports of dried fruits at present consist mainly of dates from Mesopotamia. The export trade in both fruits, however, has greatly expanded during the past quinquennium, the value of the shipments during 1924–25 amounting to £3,029,373. Apples constitute the bulk of the fresh fruit exported, although the export of citrus fruits is expanding, and experiments are being conducted in regard to the despatch of other fruits. Shipments of raisins and currants have developed into large proportions since 1914–15, and are mainly responsible for the increase in the dried fruits exports. Other fruits in the dried state, notably apricots and peaches, are receiving attention from overseas, and in 1922–23 more than £100,000 was realized from these products.

(ii) *Fresh Fruits.* Information with regard to the Australian oversea trade in fresh fruits is given hereunder :—

FRESH FRUITS.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1920–21..	11,555,200	130,471	51,686,200	535,525	40,131,000	405,054
1921–22..	2,385,800	29,907	97,343,800	973,726	94,958,000	943,819
1922–23..	2,390,600	28,103	108,391,900	1,040,310	106,001,300	1,012,207
1923–24..	3,473,300	47,343	78,927,000	870,260	75,453,700	822,917
1924–25..	3,228,200	32,009	101,348,900	1,089,544	98,120,700	1,057,535

The value of the exports of apples in 1924–25 amounted to £878,718, and of citrus fruits to £95,272.

(iii) *Dried Fruits.* Particulars of oversea imports and exports of dried fruits for the last five years are as follows :—

DRIED FRUITS (*a*).—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1920–21..	7,362.341	168,076	19.598,672	806,134	12,236.331	638,058
1921–22..	6,036,379	132,392	25,955,733	969,457	19,919,354	837,065
1922–23..	10,957,699	189.397	36,047,962	1,232,124	25,090,263	1,042,727
1923–24..	11,091,289	167.366	43.581,329	1,243,272	32,490,040	1,075,906
1924–25..	9,429,764	136,185	78,952,737	1,939,829	69,522,973	1,803,644

(*a*) Including raisins and currants referred to under Vineyards, § 14, 4.

(iv) *Jams and Jellies.* The oversea trade in jams and jellies expanded considerably during the war years, and in 1918–19 the record shipment of 79,277,560 lbs., valued at £1,847,970, was dispatched from Australia. Since that year, however, there has been a heavy decline, and the value of the exports fell to £74,464 in 1924–25. Particulars relative to imports and exports during each of the last five years are as follows :—

JAMS AND JELLIES.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1920–21..	379,401	14,543	16,535,335	550,403	16,155,934	535,860
1921–22..	184,993	8,437	5,640,579	164,046	5,455,586	155,609
1922–23..	151,572	8,253	2,605,554	79,396	2,453,982	71,143
1923–24..	138,219	7,597	2,680,047	85,062	2,541,828	77,465
1924–25..	226,253	10,810	2,470,431	74,464	2,444,178	63,654

(v) *Preserved Fruit.* Details concerning the quantities and values of preserved fruit imported into and exported from Australia cannot readily be obtained, owing to the fact that in the Customs returns particulars concerning fruit and vegetables are in certain cases combined. The total value of fruit and vegetables, preserved or partly preserved in liquid, or pulped, imported into Australia during 1924–25 was £139,708, and the corresponding value of exports was £427,778.

§ 16. Minor Crops.

1. **General.**—In addition to the crops previously dealt with, there are many others which, owing either to their nature, or to the fact that their cultivation has advanced but little beyond the experimental stage, do not occupy so prominent a position. Some of the more important of these are included under the headings—Market Gardens, Pumpkins and Melons, Nurseries, Grass Seed, Tobacco, and Millet. Cotton-growing has recently received considerable attention in the tropical portions of Australia, and the prospects of establishing this industry on a large scale are very favourable. The total area in Australia during the season 1924–25, devoted to crops not dealt with in previous sections, was 161,792 acres, the major portion of which consisted of cotton and market gardens.

2. **Market Gardens.**—Under this head are included all areas on which mixed vegetables are grown. Where considerable areas are devoted to the production of one vegetable, such for instance as the potato, the onion, the melon, the tomato, etc., the figures are usually not included with market gardens, but are shown either under some specific head, or under some general head as "Other Root Crops," or "All Other Crops." The area under market gardens during each of the last five seasons is given hereunder :—

MARKET GARDENS.—AREA, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1920–21 ..	9,888	12,201	2,018	1,471	2,269	386	..	27	28,260
1921–22 ..	8,217	14,304	1,965	1,486	2,274	681	..	27	28,954
1922–23 ..	7,743	14,108	1,838	1,438	2,698	540	..	18	28,383
1923–24 ..	8,526	16,212	1,719	1,448	2,259	478	..	17	30,659
1924–25 ..	8,824	14,620	1,619	1,577	2,913	576	..	13	30,142

3. **Grass Seed.**—The total area under this crop during 1924–25, exclusive of New South Wales, for which State complete figures as to area are not available, was 6,266 acres, of which 1,644 acres were in Victoria, 734 acres in Tasmania, 3,207 acres in Queensland, and 681 acres in South Australia. The total yield for 1924–25, including New South Wales, was 108,483 bushels, valued at £75,080. In addition to the areas planted above, 3,991 acres were sown to canary seed in Queensland during 1924–25, and furnished a yield of 29,624 bushels, valued at £39,993.

4. **Tobacco.**—Tobacco-growing has undergone marked fluctuations, although at one time it promised to occupy an important place amongst the agricultural industries of Australia. Thus, as early as the season 1888–89, the area under this crop amounted to as much as 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. This promise of importance was, however, not fulfilled, and after numerous fluctuations, in the course of which the Victorian area rose in 1895 to over 2,000 acres, and that in Queensland to over 1,000 acres, the total area for the season 1920–21 had declined to 1,345 acres. During the next three years the area increased to 2,783 acres, but an adverse season in 1924–25 reduced the acreage to 2,149 in that year, of which 719 acres were in New South Wales, 1,228 acres in Victoria, 166 acres in Queensland, and 36 acres in South Australia. Greater attention is now being paid to the proper treatment of the leaf, and flue-curing is becoming more general. In all the States in which its cultivation had been tried, the soil and climate appear to be very suitable for the growth of the plant, and the enormous importations of tobacco in its various forms into Australia furnish an indication of the extensive local market which exists for an article grown and prepared to meet the requirements of consumers. The value of the net importations of tobacco into Australia during the year 1924–25 amounted to £1,940,513, comprising unmanufactured tobacco £2,004,928, cigars £92,278, cigarettes £182,286, and snuff £1,076, while manufactured tobacco showed a balance in favour of exports amounting to £340,055.

5. **Pumpkins and Melons.**—The total area under this crop in Australia during 1924–25 was 19,232 acres, of which 3,660 acres were in New South Wales, 1,691 acres in Victoria, 13,020 acres in Queensland, 632 acres in Western Australia, 227 acres in South Australia, and 2 acres in the Federal Capital Territory. The production in all the States amounted to 72,717 tons.

6. **Hops.**—Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for the season 1924–25 being 1,806 acres, of which 1,535 acres were in Tasmania, 269 acres in Victoria, and 2 acres in South Australia. The Tasmanian area, though still small, has increased considerably during the

past twenty years, the total for the season 1901–2 being only 599 acres. On the other hand the Victorian area, which in 1901–2 was 307 acres, had diminished to 269 acres in 1924–25, although increased acreages have been planted during each of the last five years. The cultivation of hops was much more extensive in Victoria some 40 years ago than at present, the area in 1883–84 being no less than 1,758 acres. During the year 1924–25 the imports of hops exceeded the exports by 157,424 lbs., the excess value being £12,967.

7. **Flax.**—For over twenty years flax has been grown intermittently in the Gippsland district of Victoria, and attempts have been made to introduce its cultivation into Tasmania and New South Wales, but without success. About the end of the year 1917 the shortage of flax fibre in the world had become acute, and endeavours were made by the Commonwealth Government to encourage the cultivation of flax. The acreage in Victoria increased from 419 acres in 1917–18 to 1,611 acres in 1919–20, but the area had declined in 1924–25 to 130 acres. Flax products to the value of more than £1,500,000 are annually imported into Australia, and, as it has been demonstrated that flax can be grown to perfection here, a good prospect exists for the ultimate establishment of a local industry.

8. **Millet.**—Millet figures in the statistical records of three of the States. The total area devoted thereto in 1924–25 was 2,386 acres, of which 1,301 acres were in New South Wales, 531 in Victoria, and 554 in Queensland. The particulars here given relate to millet grown for grain and fibre, the quantity for green forage being dealt with in the section relating thereto.

9. **Nurseries.**—In all the States fairly large areas are occupied as nurseries for raising plants, trees, etc. Statistics of the area under flowers, fruit trees, etc., are available for New South Wales, Victoria, South Australia, and Western Australia. During 1924–25 the areas in those States were 549, 742, 148, and 118 acres respectively.

10. **Cotton.**—Information regarding the development of cotton cultivation in Australia was given in previous issues of the Official Year Book (see No. 18 page 729).

The area under cultivation and the yield in Queensland since the year 1919 are shown hereunder :—

COTTON.—AREA AND YIELD, QUEENSLAND, 1919 TO 1925.

Year.	Area.(*a*)	Yield of Unginned Cotton.
	Acres.	lbs.
1919	72	27,470
1920	166	57,065
1921	1,944	940,126
1922	8,716	3,956,635
1923	40,821	12,543,770
1924	50,186	16,416,170
1925 (*b*)	35,000	18,322,103

(*a*) Area harvested. (*b*) Estimated.

It is hoped that the industry will eventually assume large proportions in Australia.

11. **Coffee.**—Queensland is the only State in which coffee-growing has been extensively tried, but the results have not been satisfactory. The area under crop reached its highest point in the season 1901–2 with 547 acres. In subsequent seasons the area fluctuated somewhat, but on the whole with a downward tendency, and in 1924–25 only 17 acres were recorded, with a yield of 6,160 lbs.

12. **Other Crops.**—Amongst miscellaneous small crops grown in the several States may be mentioned tomatoes, rhubarb, artichokes, arrowroot, chicory, and flowers.

§ 17. Bounties.

1. **General.**—The Bounties Acts and Amendments passed by the Federal Parliament with the object of encouraging the manufacture and production of certain articles in Australia, include among the items on which bonuses were payable the following agricultural products:—Cotton, fibres, rice, coffee, tobacco, and dried fruits except currants and raisins. Though the bonuses were fairly liberal, they were not availed of to any great extent. The following table shows the amounts which have been paid in respect of all bounties in operation during the years 1921–22 to 1925–26:—

BOUNTIES.—AMOUNTS PAID, 1921–22 TO 1925–26.

Articles on which Bounty was Paid.	Rate of Bounty Payable.	Date of Expiry of Bounty.	Amount Paid.				
			1921–22.	1922–23.	1923–24.	1924–25.	1925–26.
			£	£	£	£	£
Iron and Steel Bounty Act—							
Black Steel Sheets not exceeding 1-16th of an inch in thickness, made from Australian Iron Ore and Steel manufactured in Australia, or from such imported Sheet Bar Steel as is authorized by this Act	When freight is £2 10s. per ton or under—£1 10s. per ton. When freight exceeds £2 10s. per ton—£1 10s. per ton, less the amount by which the freight exceeds £2 10s. per ton.	30th Sept., 1923 ..	..	541	..	..	..
Galvanized Sheets made from Australian Iron Ore and Steel manufactured in Australia, or from such imported Sheet Bar Steel as is authorized by this Act	When freight is £2 10s. per ton or under—£2 per ton. When freight exceeds £2 10s. per ton—£2 per ton, less the amount by which the freight exceeds £2 10s. per ton.	30th Sept., 1923 ..	5,150	5,133	..	..	..
Shale Oil Bounties Act—							
Crude Shale Oil, as prescribed, produced in Australia from Mined Kerosene Shale ..	3½d. per gal., up to 3,500,000 gals. 2d. per gal., 3,500,000 to 5,000,000 gals. 1¾d. per gal., 5,000,000 to 8,000,000 gals. 1½d. each additional gal.	31st Aug., 1926 ..	24,643	18,400	..	335	.
Iron and Steel Products Bounty Act—							
Fencing Wire, Manufactured from Materials produced and manufactured in Australia	£2 12s. per ton	..	..	11,985	53,487	71,948	97,387
Galvanized Sheets ..	£2 12s. ,, ..	..	..	..	39,758	44,545	49,221
Wire Netting	£3 8s. ,, ..	..	..	25,195	64,768	90,340	95,127
Traction Engines	According to capacity, £40—£90 per tractor ..	..	..	..	1,420	500	270
Sulphur Bounty Act—							
Sulphur from Australian Pyrites and other Sulphide Ores or Concentrates ..	£2 5s. per ton ..	..	..	..	9,382	41,130	38,549
Meat Export Bounties Act—							
Standard and Canned Beef slaughtered and exported within prescribed dates ..	Standard beef, ¼d. per lb. .. Canned beef, ¼d. per lb. ..	.. ..	..	117,246	136,900	1,039	..
Export of Live Cattle for slaughter during prescribed period ..	Live cattle, 10s. per head ..	..	..	4,521	3,632	3,991	919

BOUNTIES.—AMOUNTS PAID, 1921-22 TO 1925-26—*continued.*

Articles on which Bounty was Paid.	Rate of Bounty Payable.	Date of Expiry of Bounty.	Amount Paid.				
			1921-22.	1922-23.	1923-24.	1924-25.	1925-26.
			£	£	£	£	£
Wine Export Bounty Act—							
Fortified Wine, containing not less than 34 per centum of proof spirit, exported from the Commonwealth from 1st September, 1924, to 31st August, 1927	4s. per gallon ..	..	..	..	..	28,417	217,109
Canned Fruit Bounty Act—							
Apricots, Peaches, Pears, and Pineapples canned within prescribed dates ..	9d. to 1s. per dozen tins each containing 30 ozs. net ..	..	..	..	63,477	64,752	10,963
Such canned fruit exported from the Commonwealth during prescribed period ..	1s. to 1s. 9d. per dozen tins, each containing 30 ozs. net ..	..	..	..			
Total	.. ..	..	29,793	183,021	372,824	346,997	509,545

§ 18. Fertilizers.

1. **General.**—In the early days of settlement in Australia, scientific cultivation was practically neglected. Farmers were neither under the necessity nor were they aware of the value of supplying the proper constituents to the soil for each class of crop. The widely divergent character of the soils, their degeneration by repeated cropping, the limitations of climatic conditions, and the difficulties of following any desired order of rotation of crops, all rendered it essential to give attention to artificial manuring. The introduction of the modern seed-drill acting also as a fertilizer-distributor has greatly facilitated the use of artificial manures,,and much land formerly regarded as useless for cultivation has now been made productive. There is reason to believe that this feature will be even more strikingly characteristic in the future.

2. **Fertilizers Acts.**—In order to protect the interests of users of artificial manures, legislation has been passed in each of the States, regulating the sale and preventing the adulteration of fertilizers. A list of these Acts and their main features will be found in Year Book No. 12 (page 378).

3. **Imports.**—The local production of artificial manures has greatly increased in recent years, and the home requirements of prepared fertilizers can now be supplied by Australian manufacturers. Imports of fertilizers are also expanding, but the bulk of the inward shipments consists of rock phosphates, which form the raw material for the home manufactured superphosphate, a fertilizer which has proved eminently suitable for the growing of cereals in Australian soils. During 1924–25, the value of rock phosphates imported represented more than 72 per cent. of the total importation of fertilizers. Nauru, and Gilbert and Ellice Islands Colony in equal proportions supplied the whole of the shipments. Practically the whole of the soda nitrate came from Chile.

The imports of artificial manures during the last five years are given in the following table. Although considerable quantities of manufactured superphosphates were annually imported up till 1914–15, the importations of this fertilizer have now practically ceased :—

FERTILIZERS.—IMPORTS, AUSTRALIA. 1920–21 TO 1924–25.

Fertilizer.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Bonedust	cwt.	1,260	910	..	542	..
,, ...	£	652	556	..	164	..
Guano	cwt.	1,129,240	704,039	857.411	821,938	893.478
,, ...	£	124,193	72,892	97,526	90,415	98,515
Superphosphates ..	cwt.	..	1,034	1,007	1,270	1,200
,, ..	£	..	1,145	660	806	785
Rock Phosphates ..	cwt.	4,756,140	3,255,808	3,390,089	4,697,574	5,751,583
,, ,, ..	£	721,608	553,109	516,059	678,446	739,588
Soda Nitrate	cwt.	99,660	50,214	143,274	74,990	182,846
,, ,, ...	£	84,532	38,409	96,083	45,358	104,729
Other	cwt.	169	42,063	175,778	138,897	186,209
,, ...	£	1,792	33,561	80,720	74,403	79,616
Total	cwt.	5,986,469	4,054,068	4,567,559	5,735,211	7,015,316
	£	932,777	699.672	791,048	889,592	1.023,233

4. **Exports.**—The subjoined table shows the exports of artificial manures for the years 1920–21 to 1924–25. Practically the whole of these fertilizers are manufactured locally, and are shipped mainly to New Zealand, Japan, Java, and the Pacific Islands :—

FERTILIZERS.—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Fertilizer.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Bonedust	cwt.	59,680	33,311	54,385	49,966	13,942
,, ...	£	40,926	18,517	24,400	22,327	6,079
Superphosphates ..	cwt.	472,860	26,727	73	22	57
,, ...	£	153,060	6,284	35	7	18
Rock phosphates ..	cwt.	186,260	12,900	..	20	..
,, ,, ..	£	25,763	1,960	..	10	..
Soda nitrate	cwt.	2,720	5,790	600	405	2,529
,, ,, ...	£	3,640	5,717	715	315	1,851
Ammonia sulphate ..	cwt.	123,720	155,414	68,799	93,157	111,594
,, ,, ..	£	160,017	105,472	58,571	69,491	73,665
Other	cwt.	41,320	24,525	34,323	31,431	45,098
,, ...	£	25,190	11,956	15,816	11,824	13,916
Total	cwt.	886,560	258,667	158,180	175,001	173,220
	£	408,596	149,906	99,537	103,974	95,529

5. Statistics of Use of Fertilizers.—Statistics regarding the use of manures are collected in all the States, and the particulars for 1924–25 are as follows :—

FERTILIZERS USED IN EACH STATE, 1924–25.

State.	Total Area of Crops.	Area Manured.		Manure Used.	
		Aggregate.	Percentage on Total Area of Crops.	Natural (Stable Yard, etc.).	Artificial.
	Acres.	Acres.	%	Loads.	Tons.
New South Wales ..	4,912,124	2,634,586	53.63	181,007	76,966
Victoria	4,761,394	4,301,558	90.34	151,611	184,140
Queensland	1,069,837	60,302	5.63	40,601	15,877
South Australia ..	3,557,405	3,112,453	87.49	84,596	124,264
Western Australia ..	2,710,856	*a*2,722,735	*b*98.64	60,290	*a*110,626
Tasmania	263,872	198,929	75.39	16,597	17,133
Northern Territory ..	342	15	4.39	..	2
Fed. Cap. Territory ..	2,361	751	31.81	..	19
Total	17,278,191	13,031,329	75.14	534,702	529,027

(*a*) Includes area under sown grasses and manure used.——(*b*) Previous year's figure.

Similar particulars in respect to Australia as a whole during the past five years are as shown below :—

FERTILIZERS USED IN AUSTRALIA, 1920–21 TO 1924–25.

Year.	Total Area of Crops.	Area Manured.		Manure Used.	
		Aggregate.	Percentage on Total Area of Crops.	Natural (Stable Yard, etc.).	Artificial.
	Acres.	Acres	%	Loads.	Tons.
1920–21	15,069,858	10,290,633	68.29	556,514	375,600
1921–22	15,357,024	10,999,259	71.62	582,725	408,742
1922–23	16,543,555	12,131,831	73.33	616,804	463,673
1923–24	16,531,186	12,084,583	73.10	590,900	488,601
1924–25	17,278,191	13,031,329	75.14	534,702	529,027

The percentage of the area manured on the total area cultivated has advanced from 68.29 to 75.14 during the past five years, while the use of artificial manures has increased by 150,000 tons during the same period.

6. **Local Production of Fertilizers.**—Statistics relative to the local production of fertilizers are incomplete, and detailed returns for fertilizer factories other than bone mills are not available. The number of firms engaged in the manufacture of artificial manures in Australia at latest available date was 104, made up as follows :—New South Wales, 20 ; Victoria, 30 ; Queensland, 24 ; South Australia, 11 ; Western Australia, 11 ; and Tasmania, 8.

§ 19. Ensilage.

1. **Government Assistance in Production.**—The Government of Victoria, recognizing that defective methods of making ensilage were often adopted, has for some years been making special efforts to educate the farming community by lectures, the issue of bulletins, etc. The Government also undertakes the erection of different types of silos on very liberal terms, repayment extending over a series of years. Experts erect the silos and give practical lessons in regard to cutting and packing the silage. The New South Wales Government also gives advice in the "Agricultural Gazette," and issues special bulletins dealing with the subject, while silos have been erected at the various experimental farms.

2. **Quantity Made.**—Particulars concerning the number of holdings on which ensilage was made, and the quantity made during the seasons 1920–21 to 1924–25, are given in the following table :—

ENSILAGE MADE, 1920–21 TO 1924–25.

State or Territory.	1920–21.		1921–22.		1922–23.		1923–24.		1924–25.	
	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.
	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.
New South Wales ..	118	15,633	166	24,174	116	12,191	152	19,292	269	35,145
Victoria	99	9,702	107	5,873	103	5,674	61	3,649	106	6,667
Queensland	164	7,600	96	6,575	65	5,300	71	4,833	104	8,195
South Australia ..	25	1,616	26	1,849	26	2,595	24	2,838	20	2,067
Western Australia ..	12	390	7	381	12	331	20	1,596	29	2,287
Tasmania	11	490	10	544	12	437	9	372	10	301
Northern Territory ..	..	..	..	..	..	..	..	..	1	5
Total ..	429	35,431	412	39,396	334	26,528	337	32,580	539	54,667

(a) No. of holdings on which ensilage was made.

Following the drought of 1902–3 greater attention was paid to the making of ensilage, and during the four seasons ended 1909–10 there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The following five seasons, however, showed a falling-off, but the reduction was due to the fact that stocks had not been drawn upon to any great extent during the previous seasons. The accumulated stocks proved of great value during the 1914 drought, though far below what would have been the case if more attention had been paid to production during the previous years when there was a surplus of green forage. The quantities made since that date have fluctuated considerably, with the output in 1924–25, viz., 54,667 tons, the highest for the period.

§ 20. Agricultural Colleges and Experimental Farms.

1. **General.**—In most of the States agricultural colleges and experimental farms have been established with a view to the promotion of more scientific methods in agriculture, stock-breeding and dairying. In the colleges, and on some of the farms, provision is made for the accommodation of pupils to whom both practical and theoretical instruction is given by experts in various branches of agriculture. Analyses of soils and fertilizers are made, manures are tested, and elementary veterinary science, etc., are taught, while general experimental work is carried on with cereal and other crops, not merely for the purpose of showing that it is practicable to produce certain crops in a given place, but also to show how it is possible to make farming pay in the locality. Opportunities are afforded for practice in general agricultural work, and instruction is given in the conservation of fodder ; in cheese and butter making ; in the management, breeding, and preparation for the market of live stock ; in the eradication of pests and weeds ; and in carpentering, blacksmithing, and other trades.

Travelling expert lecturers visit the various agricultural and dairying centres, and there is a wide distribution of periodical agricultural gazettes and bulletins.

2. **Particulars of Agricultural Colleges and Experimental Farms.**—In previous issues of this volume detailed information was given regarding agricultural colleges, experimental farms, and agricultural education generally. See Year Book No. 11, pp. 393–5.

3. **Particulars respecting Agricultural and Stock Departments.**—A synopsis of the activities and operations of the Agricultural and Stock Departments of the several States as on 30th June, 1920, will be found in Year Book No. 14, pages 1180 to 1191. The main features of organization are set out under their respective headings as regards staff, expenditure, work undertaken in agricultural colleges, technical schools, experimental farms, and orchards and vineyards. The subject of lectures and other forms of agricultural instruction by experts is dealt with, as well as such matters as the distribution of plants, and the special steps taken to disseminate information amongst agriculturists, and to facilitate the marketing of products.

CHAPTER XVIII.

FARMYARD, DAIRY, AND BEE PRODUCTS.

§ 1. Introductory.

1. **General.**—The introduction of cattle into Australia, and the early history of the dairying industry are referred to in some detail in earlier issues of this work (see Official Year Book No. 6, p. 430). It may here be noted that the original stock has been crossed with specially imported stud cattle, while further judicious crossing of strains has resulted in an increased and improved milk supply. In Australia, dairy cattle thrive in the open throughout the year, local climatic conditions demanding no protection other than tree plantations for shelter, and rugging in the coldest weather. Indigenous and imported grasses furnish food during the greater part of the year, and winter fodder, when necessary, is given to the cattle in the fields. With the adoption of scientific methods in the treatment of animals and pasturages and in the processes of manufacture, coupled with effective State supervision, the dairying industry has shown rapid expansion.

2. **Official Supervision of Industry.** Dairy experts, under the supervision of the various State Agricultural Departments, give instruction in approved methods of production, and inspect animals, buildings, and marketable produce. A high standard of cleanliness, both of personnel and *matériel*, prevails. Financial assistance of a temporary nature is also given, advances made being generally repaid with promptitude.

The export trade is regulated by the terms of the Commonwealth Commerce Act 1905 and regulations thereunder. The provisions of this Act are set out in detail in Official Year Book No. 6, pp. 431–2. It will be sufficient to note here that the true trade description, &c., must be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are certificated by the inspector.

3. **Mixed Farming.**—Dairying is not now, as formerly, wholly confined to farmers, since many graziers in a large way of business have lately given it their attention. In non-coastal regions it is generally carried on in conjunction with agriculture and sheep-raising, sufficient fodder being grown to carry the cattle through the winter months. Local wants are thus met, and in many places remote from the metropolis well-equipped factories have been established.

4. **Factory System.**—Cream separation and butter-making are often carried on together under the co-operative system. The creation of large central butter factories, supplied by numerous separating establishments or "creameries," has resulted in a considerable reduction in the cost of manufacture, since improved appliances such as refrigerators may be profitably worked at the larger establishments. The product is also of a more uniform quality. The number of farmers who adhere to hand processes is rapidly diminishing. Formerly the average quantity of milk used per pound of hand-made butter was about 3 gallons, but separator butter requires only 2¼ gallons.

5. **Butter and Cheese Factories.**—The factories in Australia for the manufacture of butter, cheese, and condensed milk numbered 600 in 1924–25. These were distributed in the various States as follows :—New South Wales, 183 ; Victoria, 186 ; Queensland, 128 ; South Australia, 62 ; Western Australia, 8 ; and Tasmania, 33.

§ 2. Dairy Cattle and Dairy Products.

1. **Dairy Herds.**—The dairy herds of Australia were severely depleted during the drought of 1914–15, when the number was reduced to 1,684,393. Following that year substantial increases have taken place, particularly since 1919, and the number recorded in 1924 represents a gain of more than 400,000 in the past decade. In New South Wales, Victoria, South Australia, and Tasmania the proportion of dairy cattle to all cattle is high. In Queensland, the Northern Territory, and Western Australia there is a greatly preponderating number of other cattle, dairying not being firmly established in the tropical regions of the Continent. In Southern Queensland, however, the industry has developed remarkably during the past decennium, and the progress attained in that area has been largely responsible for the Australian increases since 1914. The figures for the Northern Territory are rough estimates only :—

CATTLE AND DAIRY CATTLE.—NUMBER, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
New South Wales ..	All Cattle ..	3,367,880	3,538,240	3,244,905	2,932,437	2,871,196
	Dairy Cows ..	757,534	815,579	796,957	784,824	834,557
Victoria	All Cattle ..	1,575,159	1,750,369	1,785,660	1,591,367	1,605,554
	Dairy Cows ..	620,005	719,473	794,898	738,149	760,207
Queensland	All Cattle ..	6,455,067	7,047,370	6,955,463	6,396,514	6,454,653
	Dairy Cows ..	448,634	554,208	563,683	512,529	584,886
South Australia ..	All Cattle ..	376,399	419,197	425,811	413,272	400,423
	Dairy Cows ..	117,536	131,054	135,450	136,438	133,619
Western Australia ..	All Cattle ..	849,803	893,108	939,596	953,764	891,564
	Dairy Cows ..	47,719	53,828	58,387	61,832	60,882
Tasmania	All Cattle ..	208,202	216,704	218,197	220,351	225,740
	Dairy Cows ..	63,681	68,595	69,991	70,497	70,073
Northern Territory ..	All Cattle ..	659,840	568,031	760,766	843,718	855,285
	Dairy Cows ..	70	70	(*a*)	(*a*)	(*a*)
Federal Capital Territory	All Cattle ..	7,387	8,290	6,275	6,085	5,058
	Dairy Cows ..	459	414	443	375	413
Australia ..	All Cattle ..	13,499,737	14,441,309	14,336,673	13,357,508	13,309,473
	Dairy Cows ..	2,055,638	2,343,221	2,419,809	2,304,644	2,444,637

(*a*) Not available.

2. **Milk.**—The annual quantity of milk produced per dairy cow varies greatly with breed, locality and season, reaching as high as 1,000 gallons, but averaging for the whole of Australia for all dairy cows and for all seasons prior to 1916 considerably under 300 gallons per annum. Recently there has been an improvement in the grade of dairy cattle, and the 300 gallon mark has been exceeded on three occasions during the past quinquennium, the yield of 363 gallons in 1924 constituting a record. The best yields over a series of years appear to be in Victoria, South Australia and New South Wales, while Queensland and Tasmania in normal years are above Western Australia. In the following table the annual average yields per cow for the last five years are based on the number of dairy cows which were in milk during any part of the year. The average given is considerably below that for cows which were yielding during the greater part of the year. The highest averages were, of course, obtained in those States which have most extensively adopted scientific methods of dairying, such as systematic breeding, culling of herds, milk testing, etc.

MILK PRODUCTION, 1920 TO 1924.

Heading.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia. (*b*)
1920—								
Dairy Cows (*a*) .. No.	727,337	621,829	410,890	112,259	45,356	63,877	469	1,982,017
Production 1,000 gals.	250,098	204,522	104,659	34,657	10,234	19,000	105	623,275
Aver. per cow ..gals.	344	329	255	309	226	297	223	314
1921—								
Dairy Cows (*a*) .. No.	786,557	669,739	501,421	124,295	50,773	66,138	437	2,199,360
Production 1,000 gals.	285,166	245,181	151,081	41,398	11,329	21,000	105	755,260
Aver. per cow .. gals.	363	366	301	333	223	318	240	343
1922—								
Dairy Cows (*a*) .. No.	806,268	757,186	558,945	133,252	56,108	69,293	428	2,381,480
Production 1,000 gals.	226,864	249,322	134,032	42,054	11,932	21,000	106	685,310
Aver. per cow ..gals.	281	329	240	316	213	303	248	288
1923—								
Dairy Cows (*a*) .. No.	790,890	766,524	538,106	135,944	60,110	70,244	409	2,362,227
Production 1,000 gals.	225,395	260,953	104,204	47,621	13,048	21,200	111	672,532
Aver. per cow ..gals.	285	340	194	350	217	302	271	285
1924—								
Dairy Cows (*a*) .. No.	809,691	749,178	548,707	135,029	61,357	70,285	394	2,374,641
Production 1,000 gals.	316,810	294,765	170,074	45,426	13,363	21,840	116	862,394
Aver. per cow ..gals.	391	393	310	336	218	311	294	363

(*a*) Mean for the year. (*b*) Exclusive of Northern Territory.

3. **Butter and Cheese.**—Although the quantity of dairy production is largely affected by the nature of the seasons, an important advance in the output of butter has taken place in the past decade. During that period the average annual production increased from 197,000,000 lb. for the quinquennium 1910–1914, to 250,000,000 lb. for the latest five years under review. The marked development of dairying in Queensland, where the butter production has nearly doubled since 1914, was largely responsible for the increased butter output in Australia, although Victoria and New South Wales made important contributions to the general progress. The maximum output of butter in Australia was recorded in 1924, when, as the result of a specially favourable season, 313,952,291 lb. were manufactured.

The manufacture of cheese has steadily increased throughout Australia during recent years, the production in 1921 of 32,653,003 lb. being the highest yet recorded, followed very closely by the 31,442,292 lb. returned for 1924. The output of cheese has grown from 16 to 26 million lb. during the past ten years, or more than 60 per cent.

The development in dairy production since 1896, and in the exports of butter from 1901 onwards are shown in the graphs on page 612. Particulars for the past five years are as follows :—

BUTTER AND CHEESE PRODUCTION, 1920 TO 1924.

State.	1920.	1921.	1922.	1923.	1924.
			BUTTER.		
	lb.	lb.	lb.	lb.	lb.
New South Wales	*a*84,259,641	*a*100,652,620	*a*73,705,349	*a*72,666,613	*a*117,195,871
Victoria	*a*64,938,458	*a*82,981,570	*a*84,355,940	*a*86,888,725	*a*100,849,382
Queensland	40,751,373	60,923,194	53,785,599	40,659,634	*a*70,406,492
South Australia	*a*11,897,279	*a*14,565,599	*a*14,646,632	*a*17,244,389	*a*16,066,694
Western Australia	2,212,311	2,658,153	2,766,533	3,005,491	2,962,630
Tasmania	4,014,402	5,270,243	5,716,708	*a*6,183,521	*a*6,455,746
Federal Capital Territory	*a*8,400	*a*19,961	18,248	17,480	15,476
Australia .	208,081,864	267,071,340	234,995,009	226,665,853	313,952,291
			CHEESE.		
	lb.	lb.	lb.	lb.	ln.
New South Wales	*a*6,407,209	*a*7,367,057	*a*5,198,905	*a*5,912,656	*a*7,705,596
Victoria	*a*3,636,571	*a*5,675,909	*a*3,754,960	*a*7,216,936	*a*6,193,135
Queensland	11,512,262	15,200,527	10,560,316	7,221,355	*a*12,643,863
South Australia	*a*1,804,696	*a*3,392,400	*a*3,261,565	*a*3,679,552	*a*3,743,628
Western Australia	354	1,073	212	4,365	4,055
Tasmania	799,432	1,016,037	934,601	*a*1,345,661	*a*1,152,015
Australia	24,160,524	32,653,003	23,710,559	25,380,525	31,442,292

(*a*) For year ended 30th June of year following.

4. **Concentrated Milk.**—" Condensed " or " concentrated " milk represents milk the bulk of which is reduced by evaporation. The industry is of comparatively recent growth, the quantity of milk treated in 1901 being negligible, but production increased annually until in 1911 the output nearly doubled that of the previous year. Thenceforward rapid progress was made, the greatest development taking place in Victoria, where the industry is most largely established. There is still an import of milk, but the exports in each year far outweigh the quantity imported. No condensed or concentrated milk is made in South Australia, Western Australia, or Tasmania. In New South Wales, Victoria, and Queensland the returns for the last five years were as follows :—

CONDENSED, CONCENTRATED, OR POWDERED MILK MADE, 1920 TO 1924.

Year.	N.S.W.(*a*)	Victoria.(*a*)	Queensland.	Australia.
	lb.	lb.	lb.	lb.
1920	14,938,147	42,643,871	13,362,464	70,944,482
1921	6,860,466	48,354,210	15,168,652	70,383,328
1922	3,544,565	38,314,260	9,601,914	51,460,739
1923	7,158,537	49,099,632	8,131,648	64,389,817
1924	5,804,191	45,693,120	*a*10,511,919	62,009,230

(*a*) For year ended 30th June of year following.

5. **Oversea Trade in Butter, Cheese, and Milk.**—The following tables give the imports, exports, and net exports of butter, cheese, and milk. In each of the five years dealt with the exports of butter, cheese, and condensed milk exceeded the imports.

BUTTER, CHEESE, AND MILK, IMPORTS AND EXPORTS.—AUSTRALIA, 1920–21 TO 1924–25.

Products.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
IMPORTS.					
Butter .. .. .. lb.	33,762	732,336	2,955,934	2,368,102	19,717
,, ... £	2,997	58,982	237,149	191,828	1,340
Cheese .. .. .. lb.	72,110	85.601	499,125	1,422,148	356,717
,, ... £	8,371	7,518	27,345	71,379	37,448
Milk—concentrated and preserved(*a*)lb.	603,565	130,592	417,054	373,866	367,073
,, ,, ,, ,, £	30,883	14,658	28,371	26,652	32,359
EXPORTS.					
Butter .. .. .. lb.	92,420,995	127,579,797	79,571,151	65,984,020	145,281,326
,, ... £	11,067,104	7,987,558	6,133,864	4,919,664	10,006,081
Cheese .. .. .. lb.	9,531,310	12,671,029	5,454,466	3,831,269	10,397,392
,, ... £	514,252	438,372	231,907	142,820	365,764
Milk—concentrated and preserved(*a*)lb.	37,381,955	36,705,320	21,234,027	17,765,480	29,172.996
,, ,, ,, ,, £	2,189,167	2,132,580	1,328,762	1,080,088	1,694,634
NET EXPORTS.(*b*)					
Butter .. .. .. lb.	92,387,233	126,847,461	76,615,217	63,615,918	145,261,609
,, ... £	11,064,107	7,928 576	5 896,715	4,727,836	10,004,741
Cheese .. .. .. lb.	9,459,200	12,585,428	4,955,341	2,409,121	10,040,675
,, ... £	505,881	430,854	204,562	71,441	328,316
Milk—concentrated and preserved(*a*)lb.	36,778,390	36,574,728	20,816,973	17,391,614	28,805,923
,, ,, ,, ,, £	2,158,284	2,117,922	1,300,391	1,053,436	1,662,275

(*a*) See definition above. (*b*) Excess of exports over imports.

6. **Local Consumption of Butter and Cheese.**—The total production of butter and cheese, with the subtraction or addition of the net export or import for the corresponding period gives approximately the quantity available for consumption in Australia. The figures for the past five years are as follows :—

BUTTER AND CHEESE.—LOCAL CONSUMPTION, 1920 TO 1924.

Products.		1920.	1921.	1922.	1923.	1924.
		lb.	lb.	lb.	lb.	lb.
Butter ..	Total	115,694,631	139,491,543	158,379,792	163,049,935	168,690,682
,, ..	Per head of population ..	21.38	25.32	28.12	28.36	28.72
Cheese ..	Total	14,701,324	19,981,974	18,755,218	22,971,404	21,401,617
,, ..	Per head of population ..	2.72	3.63	3.33	4.00	3.64

The quantity available for consumption in 1924 averaged 28¾ lb. of butter and 3.6 lb. of cheese, or a total of 32⅓ lb. per head of population, an amount probably unsurpassed anywhere. The consumption of butter and cheese in the United Kingdom in normal times is given as about 22½ lb. per head per annum.

§ 3. Pigs and Pig Products.

1. **Pigs.**—The number of pigs in Australia from 1920 to 1924 is shown below :—

PIGS.—NUMBER, 1920 TO 1924.

State.	1920.	1921.	1922.	1923.	1924.
New South Wales (*b*) ..	305,967	383,326	340,579	322,762	339,378
Victoria (*a*)	175,275	230,770	294,962	259,795	288,509
Queensland	104,370	145,083	160,617	132,243	156,163
South Australia	(*b*) 78,395	(*b*) 87,667	(*b*) 75,520	(*b*) 73,414	80,988
Western Australia ..	60,581	63,001	67,561	61,478	66,375
Tasmania (*a*)	38,116	49,743	46,056	47,101	47,305
Northern Territory ..	1,416	452	361	647	1,000
Federal Cap. Territory (*b*)	286	343	274	434	291
Australia	764,406	960,385	985,930	897,874	980,009

(*a*) As on 1st March of year following. (*b*) As on 30th June of year following.

For many years the number of pigs in Australia has fluctuated considerably. There was a heavy falling off in 1915, followed by substantial increases during 1916 and 1917, the number in 1917, viz., 1,169,365, being the highest recorded in Australia. From 1917 onwards the numbers declined for a time, but during the past four years they have remained fairly constant at nearly one million. The number of pigs per head of population, and the number per square mile, will be found in the tables of live stock, page 601.

2. **Bacon and Ham.**—(i) *Production.* During the past five years the production of bacon and ham has fluctuated between the record quantity of 69,311,800 lb. manufactured in 1924, and 50,250,487 lb. in 1920, the average for the period amounting to 61,650,693 lb., which is far in excess of any previous five-yearly average.

BACON AND HAM.—PRODUCTION, 1920 TO 1924.

State.	1920.	1921.	1922.	1923.	1924.
	lb.	lb.	lb.	lb.	lb.
New South Wales (*a*)	16,249,762	20,413,330	19,234,681	19,044,294	21,068,976
Victoria (*a*) ..	15,139,100	17,396,798	19,269,125	22,540,973	21,993,869
Queensland ..	11,337,050	12,386,417	15,130,545	16,219.969	*a*15,640,561
South Australia (*a*) ..	4,172,372	5,089,424	5,002,199	5,095,970	5,374,457
Western Australia (*b*)	2,077,662	1,962,621	2,050,220	2,420,585	2,797,151
Tasmania	1,267,061	1,356,329	1,778,015	*a*2,271,141	*a*2,428,966
Federal Cap. Territory*a*	7.480	9,540	11,185	7,815	7,820
Total ..	50,250,487	58,614,459	62,475,970	67,600,747	69,311,800

(*a*) For year ended 30th June of year following. (*b*) A portion only from pigs slaughtered in the State; balance imported and subsequently cured.

(ii) *Local Consumption.* From 1904 onwards the production of bacon and ham has been sufficient to meet the local demand, and provide a small surplus for export. The total home consumption and the average per head of population for the last five years are given hereunder :—

BACON AND HAM.—LOCAL CONSUMPTION, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
	lb.	lb.	lb.	lb.	lb.
Total	47,151,519	55,926,806	60,753.826	66,372,107	67,969,350
Per head of population ..	8.71	10.15	10.78	11.54	11.57

3. **Oversea Trade in Pig Products.** The oversea trade in pigs and pig products for the last five years is shown in the following table :—

PIG PRODUCTS.—AUSTRALIAN TRADE, 1920–21 TO 1924–25.

Particulars.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
PIGS.						
Imports	No.	11	31	31	13	10
,, ...	£	65	194	596	376	150
Exports	No.	166	119	67	38	65
,, ...	£	1,199	990	510	288	676
Net Exports ..	No.	155	88	36	25	55
,, ..	£	1,134	796	−86	−88	526
BACON AND HAM.						
Imports	lb.	14,610	25,292	149,270	320,030	322,106
,, ...	£	1,479	1,610	8,414	19,005	18,492
Exports	lb.	3,113,578	2,712,945	1,871,414	1,548,670	1,664,556
,, ...	£	323,280	223,067	158,414	132,581	124,891
Net Exports ..	lb.	3,098,968	2,687,653	1,722,144	1,228,640	1,342,450
,, ..	£	321,801	221,457	150,000	113,576	106,399

NOTE.—The minus sign (−) signifies net imports.

PIG PRODUCTS.—AUSTRALIAN TRADE, 1920–21 TO 1924–25—*continued.*

Particulars.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
			LARD.			
Imports	lb.	42,795	115,659	505,827	574,733	112,084
,, ...	£	1,825	3,625	12,905	17,181	4,080
Exports	lb.	3,118,105	2,909,658	1,358,291	651,530	1,523,530
,, ...	£	153,084	88,753	38,491	24,027	42,744
Net Exports ..	lb.	3,075,310	2,793,999	852,464	76,797	1,411,446
,, ..	£	151,259	85,128	25,586	6,846	38,664
			FROZEN PORK.			
Imports	lb.	..	..	370,094	1,679,278	962,639
,, ...	£	..	..	14,486	63,908	35,695
Exports	lb.	163,303	152,584	144,796	53,142	61,393
,, ...	£	9,370	7,414	6,282	2,099	2,749
Net Exports ..	lb.	163,303	152,584	−225,298	−1,626,136	−901,246
,, ..	£	9,370	7,414	−8,204	−61,809	−32,946

NOTE.—The minus sign (−) signifies net imports.

The output of pig products in Australia is usually sufficient to meet local requirements, and provide a small surplus for export. During the last five years the value of the average annual net export amounted to £227,365, the bulk of the shipments consisting of bacon, ham and lard.

§ 4. Total Dairy Production.

The total dairy production of Australia in 1924–25 is shown below :—

TOTAL DAIRY PRODUCTION.—AUSTRALIA, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tasmania.	Fed. Cap. Ter.	Total.
				MILK.				
Used for—	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
Butter ..	251,996,370	226,979,340	143,088,224	33,749,539	6,844,365	14,604,188	54,345	677,316,371
Cheese ..	8,015,363	7,131,470	12,462,873	3,578,648	5,298	1,135,220	..	32,328,872
Condensing and concentrating ..	2,010,155	12,961,290	2,657,981	..	..	..	..	17,629,426
Other purposes ..	54,788,442	47,692,770	11,864,622	8,098,206	6,513,083	6,100,592	61,325	135,119,040
Total ..	316,810,330	294,764,870	170,073,700	45,426,393	13,362,746	21,840,000	115,670	862,393,709
				BUTTER.				
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
In Factories	112,504,674	95,454,295	67,915,838	12,432,843	1,660,242	4,590,505	..	294,558,397
On Dairy and other Farms ..	4,691,197	5,395,087	2,490,654	3,633,851	1,302,388	1,865,241	15,476	19,393,894
Total ..	117,195,871	100,849,382	70,406,492	16,066,694	2,962,630	6,455,746	15,476	313,952,291

(a) For year ended 31st December, 1924.

TOTAL DAIRY PRODUCTION.—AUSTRALIA, 1924-25—*continued.*

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tasmania.	Fed. Cap. Ter.	Total.
CHEESE.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
In Factories	7,602,232	5,964,356	12,638,700	3,743,388	..	692,416	..	30,641,092
On Dairy and other Farms ..	103,364	228,779	5,163	240	4,055	459,599	..	801,200
Total ..	7,705,596	6,193,135	12,643,863	3,743,628	4,055	1,152,015	..	31,442,292
CONDENSED, CONCENTRATED, OR POWDERED MILK.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
In Factories	5,804,191	45,693,120	10,511,919	..	..	..	..	62,009,230
BACON AND HAM.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
In Factories	19,764,983	20,431,914	15,334,549	4,785,763	*b*2,607,998	1,677,471	..	64,602,678
On Dairy and other Farms ..	1,303,993	1,561,955	306,012	588,694	189,153	751,495	7,820	4,709,122
Total ..	21,068,976	21,993,869	15,640,561	5,374,457	2,797,151	2,428,966	7,820	69,311,800

(*a*) For year ended 31st December, 1924. (*b*) A portion only from pigs slaughtered in the State, the balance being imported and subsequently cured.

Particulars in regard to the production of other milk products are not available for all the States, but the following articles were made in Victoria during 1924–25 :—Casein, 2,716,042 lb. ; milk sugar, 415,753 lb.

§ 5. Poultry Farming.

1. **General.**—Poultry stocks are largely maintained by farmers, and production therefrom furnishes a considerable addition to the annual agricultural or dairying returns. During recent years, however, poultry-keeping has assumed an independent position among rural industries, while it is also carried on in conjunction with pig-farming. Special poultry farms have been instituted for scientific breeding, and poultry experts give lectures and instruction. Poultry for consumption is extensively reared, and the egg-producing qualities of the birds have been greatly improved by careful breeding. Co-operative egg-collecting circles have been formed in some districts ; eggs are also delivered with the milk and cream to the local butter factories, and thence forwarded to market.

2. **Poultry Products.** There is some difficulty in obtaining complete figures for the yield of poultry products. The following values relate to poultry and eggs :—

POULTRY AND EGGS.—VALUE OF PRODUCTION, 1920 21 TO 1924–25.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania. (*a*)	Australia.
	£	£	£	£	£	£	£
1920–21 ..	3,196,000	4,545,620	449,827	1,164,999	189,658	300,000	9,846,104
1921-22 ..	2,650,000	4,406,750	429,983	1,027,634	208,429	300,000	9,022,796
1922-23 ..	2,894,000	4,315,810	417,052	1,066,137	240,423	300,000	9,233,422
1923-24 ..	2,443,160	4,587,560	364,681	1,088,105	252,527	300,000	9,036,033
1924-25 ..	2,727,000	4,326,295	530,782	1,148,322	286,350	300,000	9,318,749

(*a*) Estimated.

3. **Oversea Trade in Poultry Products.**—The Australian oversea trade in poultry products is limited to a small annual consignment of eggs from New South Wales to the United Kingdom. The exports of frozen poultry expanded during the three years ended 1922–23, but since that year the shipments have not been maintained. The oversea trade during the past five years was as follows :—

POULTRY PRODUCTS, TRADE.—AUSTRALIA, 1920–21 TO 1924–25.

Particulars.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
LIVE POULTRY.						
Imports ..	.. No.	484	663	791	881	459
,, ..	.. £	850	1,170	1,534	3,981	1,084
Exports ..	.. No.	2,886	2,626	2,872	2,234	2,057
,, ..	.. £	2,741	3,272	2,682	1,707	1,527
Net Exports	.. No.	2,402	1,963	2,081	1,353	1,598
,,	.. £	1,891	2,102	1,148	—2,274	443
FROZEN POULTRY.						
Imports ..	.. lb.	4,087	2,712	4,784	5,438	11,591
,, ..	.. £	328	178	228	269	752
Exports ..	.. pair	22,376	50,367	34,399	10,882	10,898
,, ..	.. £	29,963	50,205	42,951	11,270	14,141
Net Exports	..	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)
,,	.. £	29,635	50,027	42,723	11,001	13,389
EGGS.						
Imports ..	.. doz.	27,452	33,558	26,750	28,123	30,051
,, ..	.. £	1,802	1,994	1,591	1,707	1,796
Exports ..	.. doz.	413,602	808,849	1,236,033	655,620	692,015
,, ..	.. £	53,932	75,857	102,946	52,743	53,538
Net Exports	.. doz.	386,150	775,291	1,209,283	627,497	661,964
,,	.. £	52,130	73,863	101,355	51,036	51,742
EGG-CONTENTS.						
Imports ..	.. lb.	23,898	26,590	33,672	34,418	32,105
,, ..	.. £	4,446	4,091	5,250	7,845	7,190
Exports ..	.. lb.	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)
,, ..	.. £	27,298	12,116	38	212	144
Net Exports	.. lb.	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)
,,	.. £	22,852	8,025	—5,212	—7,633	—7,046

NOTE.—The minus — signifies net imports. (*a*) Quantity not available.

§ 6. Bee Farming.

1. **General.**—As in the case with poultry-farming, bee-farming is frequently carried on in connexion with agriculture or dairying. The returns of honey from productive hives during 1924–25 gave an average of 74 lb. per hive, while the average quantity of wax was 0.89 lb. per hive.

2. **Production of Honey and Beeswax.**—The number of hives and the production of honey and beeswax during the year 1924–25 are given in the following table :—

BEE-HIVES, HONEY, AND BEESWAX, 1924–25.

State.	Bee Hives.			Honey Produced.		Beeswax Produced.	
	Productive.	Unproductive.	Total.	Quantity.	Value.	Quantity.	Value.
	No.	No.	No.	lb.	£	lb.	£
New South Wales ..	34,675	5,431	40,106	3,088,550	57,910	40,043	2,586
Victoria	55,616	16,302	71,918	4,054,975	84,479	47,117	3,337
Queensland ..	11,588	3,595	15,183	691,136	12,388	9,883	566
South Australia ..	32,725	5,317	38,042	2,764,389	46,073	27,837	1,624
Western Australia ..	10,193	3,028	13,221	378,889	7,584	6,844	476
Tasmania	4,822	3,060	7,882	95,476	3,580	1,666	70
Fed. Cap. Territory ..	17	..	17	1,600	30	65	4
Australia ..	149,636	36,733	186,369	11,075,015	212,044	133,455	8,663

The table hereunder gives the production of honey and beeswax for the latest available five years :—

HONEY AND BEESWAX PRODUCTION, 1920–21 TO 1924–25.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
				HONEY.				
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1920–21	1,441,617	1,724,942	426,662	1,821,811	149,226	85,125	1,760	5,651,143
1921–22	2,986,574	2,712,675	598,357	791,324	196,440	82,920	2,500	7,370,790
1922–23	1,235,905	2,285,000	580,057	1,863,026	330,869	71,030	3,175	6,369,062
1923–24	590,800	2,110,713	505,346	721,640	395,047	133,330	180	4,457,056
1924–25	3,088,550	4,054,975	691,136	2,764,389	378,889	95,476	1,600	11,075,015
				BEESWAX.				
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1920–21	23,234	24,222	7,501	17,501	3,849	1,788	86	78,181
1921–22	28,255	32,737	8,231	9,108	3,980	1,976	130	84,417
1922–23	28,244	27,182	8,895	19,111	5,391	1,473	198	90,494
1923–24	12,701	25,371	7,405	11,216	5,637	1,596	2	63,928
1924–25	40,043	47,117	9,883	27,837	6,844	1,666	65	133,455

The quantity of honey and beeswax produced naturally varies from year to year according to the condition of the seasons. During the last five years New South Wales has produced 9,343,446 lb. of honey and 132,477 lb. of beeswax, while the Victorian figures amounted to 12,888,305 lb. and 156,629 lb. respectively for honey and beeswax. These two States together accounted for 63¾ per cent. of the total production of honey, and 64 per cent. of the beeswax. Next in order of importance were South Australia, Queensland, and Western Australia.

3. Oversesa Trade in Bee Products.—In normal years the local production of honey exceeds Australian requirements, and a small quantity is available for export. During the past five years the value of the exports amounted to only £18,361, or an annual average of £3,672, owing to the decrease in production. Australian honey exhibited at the Franco-British Exhibition in London in 1908 obtained the highest award. The more general use of frame hives has affected the production of wax, and as a result the quantity imported has exceeded that exported during each of the past five years.

BEE PRODUCTS.—IMPORTS, EXPORTS, ETC., AUSTRALIA, 1920–21 TO 1924–25.

Particulars.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
			HONEY.			
Imports	lb.	201,548	13,572	811	772	1,008
,, ...	£	5,838	399	24	22	33
Exports	lb.	97,541	94,471	57,638	41,584	137,116
,, ...	£	5,328	4,448	2,718	2,060	3,807
Net Exports ..	lb.	−104,007	80,899	56,827	40,812	136,108
,, ..	£	− 510	4,049	2,694	2,038	3,774
			BEESWAX.			
Imports	lb.	28,235	223,441	238,368	76,478	109,816
,, ...	£	2,452	12,786	13,817	4,759	8,288
Exports	lb.	7,535	2,259	671	2,046	1,956
,, ...	£	810	154	61	149	187
Net Exports ..	lb.	−20,700	−221,182	−237,697	−74,432	−107,860
,, ..	£	− 1,642	− 12,632	− 13,756	− 4,610	− 8,101

NOTE.—The minus sign (−) signifies net imports.

§ 7. Value of Farmyard, Dairy, and Bee Products.

The value of the farmyard, dairy and bee products raised in Australia in 1924–25 was as follows :—

FARMYARD, DAIRY, AND BEE PRODUCTS.—VALUE, 1924–25.

Products.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£	£
Milk, consumed as such ..	2,602,451	2,265,407	563,570	384,665	309,371	289,778	..	2,912	6,418,154
Butter ..	7,243,268	6,616,704	4,862,726	1,106,782	222,499	432,586	..	956	20,485,521
Cheese ..	260,464	204,865	466,638	119,556	129	39,112	..	..	1,090,764
Condensed and concentrated milk	*b* 244,574	*c*1,582,915	*b* 292,641	..	..	..	..	..	2,120,130
Bacon and ham	1,025,066	1,464,093	713,475	335,822	179,288	127,354	..	380	3,845,478
Pork	409,947	455,477	192,989	152,304	134,825	111,576	756	..	1,457,874
Lard	22,457	33,471	24,810	8,227	4,869	3,810	..	8	97,652
Livestock ..	16,716	71,785	17,940	15,148	12,242	153	530	..	134,514
Poultry and eggs	2,727,000	4,326,295	530,782	1,148,322	286,350	300,000	..	(*a*)	9,318,749
Honey and wax	60,496	87,816	12,954	47,697	8,060	3,650	..	34	220,707
Total ..	14,612,439	17,108,828	7,678,525	3,318,523	1,157,633	1,308,019	1,286	4,290	45,189,543

(*a*) Included with New South Wales. (*b*) Includes other Milk Products made. (*c*) Includes casein £63,517, and milk sugar £15,827.

§ 8. Exports of Australian Farmyard, Dairy, and Bee Products.

The quantities and values of Australian farmyard, dairy, and bee products exported during each of the last five years are shown below :—

AUSTRALIAN FARMYARD, DAIRY AND BEE PRODUCTS.—EXPORTS, 1920–21 TO 1924–25.

Particulars.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
		QUANTITY.				
Beeswax	lb.	5,838	830	581	1,902	782
Butter	,,	92,420,995	127 347,428	78,975,387	65,440,852	145 281,326
Cheese	,,	9,530,221	12,670,782	5,454,415	3,787,714	10,353,950
Egg albumen and yolk	,,	(a)	(a)	(a)	(a)	(a)
Eggs	doz.	413,477	807,359	1,236,033	655,215	691,740
Feathers, undressed	..	(a)	(a)	(a)	(a)	(a)
Honey	lb.	97,541	94,471	57,638	41,584	137,116
Lard	,,	3,118,105	2,908,595	1,357,372	645,930	1,523,530
Meats—						
Bacon and Ham	,,	3,113,488	2,712,911	1,871,414	1,548,670	1,664,556
Frozen Poultry	pair	22,376	50,367	34,399	10,882	10,898
Frozen Pork	lb.	163,309	152,584	137,946	53,142	61,393
Milk, concentrated and preserved	,,	37,281,554	36,678,109	21,135,137	17,762,106	29,165,694
Pigs, living	No.	166	119	67	38	65
Poultry, living	,,	2,880	2,624	2,858	2,174	2,057
		VALUE.				
		£	£	£	£	£
Beeswax	..	628	77	51	137	69
Butter	..	11,067,104	7,968,078	6,082,414	4,874,921	10,006,081
Cheese	.	514,128	438,350	231,898	140,715	363,757
Egg albumen and yolk	..	27,055	12,061	32	210	..
Eggs	..	53,920	75,764	102,946	52,715	53,518
Feathers, undressed	..	1,133	956	1,247	303	1,112
Honey	..	5,328	4,448	2,718	2,060	3,807
Lard	..	153,084	88,694	38,447	23,809	42,744
Meats—						
Bacon and Ham	..	323,253	223,065	158,414	132,581	124,891
Frozen Poultry	..	29,963	50,205	42,951	11,270	14,141
Frozen pork	..	9,370	7,414	6,063	2,099	2,749
Milk, concentrated and preserved	..	2,184,761	2,131,279	1,325,883	1,079,943	1,694,230
Pigs, living	..	1,199	990	510	288	676
Poultry, living	..	2,731	3,268	2,640	1,649	1,527
Total	..	14,373,657	11,004,649	7,996,214	6,322,700	12,309,302

(a) Quantity not available.

§ 9. British Imports of Dairy Products.

1. Quantities and Values.—The following table gives the quantities and values of the principal dairy products imported into the United Kingdom during the years 1920 to 1924 :—

DAIRY PRODUCTS.—IMPORTS, UNITED KINGDOM, 1920 TO 1924.

Products.		1920.	1921.	1922.	1923.	1924.
Butter	cwt.	1,702,203	3,523,976	4,268,561	5,095,511	5,287,244
,,	£	24,518,748	42,339,947	37,315,536	44,234,534	49,647,492
Cheese	cwt.	2,750,260	2,817,465	2,659,345	2,838,546	2,887,413
,,	£	20,633,946	17,446,521	12,437,818	15,260,707	13,552,406
Milk, concentrated and preserved	cwt.	2,127,199	2,350,610	2,059,050	2,366,532	2,333,701
,, ,, ,, ,,	£	13,083,697	11,303,566	6,588,155	6,716,648	6,183,530
Bacon and ham	cwt.	5,935,981	6,804,875	7,365,394	9,540,241	9,509,399
,, ,,	£	53,339,250	51,745,149	44,115,900	46,536,807	45,050,619
Pork (a)	cwt.	485,181	372,055	292,358	475,963	238,206
..	£	3,443,332	1,863,027	1,102,304	1,898,233	952,057

(a) Frozen, chilled, and salted.

2. **Butter.**—(i) *Imports.* Australia has for many years supplied a large proportion of the butter imported into the United Kingdom. The quantity shipped in 1924 amounted to 657,481 cwt., or about 12½ per cent. of the total importation. The Australian contribution was valued at £5,648,639, and was exceeded only by that shipped from Denmark and New Zealand.

BUTTER IMPORTS.—UNITED KINGDOM, 1924.

Country from which Imported.	Quantity.	Value.
	Cwt.	£
Denmark ..	1,734,134	18,118,126
New Zealand ..	1,081,959	9,956,812
Australia ..	**657,481**	**5,648,639**
Argentine Republic	538,504	4,423,262
Irish Free State ..	461,367	4,111,403
Soviet Republics	282,585	2,338,450
Finland ..	134,919	1,299,898
Canada	131,374	1,269,186
Netherlands ..	92,114	840,107
Sweden ..	57,654	587,844
United States of America ..	35,015	342,462
Latvia ..	32,251	282,309
Estonia ..	22,335	205,895
France ..	13,739	121,679
Norway ..	4,644	46,428
British Possessions, n.e.i. ..	4,877	34,191
Foreign Countries, n.e.i. ..	2,292	20,801
Total ..	5,287,244	49,647,492

(ii) *London Prices.* The average price of the best quality Australian butter in London during the past ten years is shown in the following table :—

AUSTRALIAN BUTTER.—LONDON PRICES, 1915 TO 1925.

Year.	Average Top Price per cwt.
	s. *d.*
1915	144 6
1916	169 6
1917	(*a*) 206 0
1918	(*b*) 252 0
1919	(*b*) 252 0
1920	(*b*) 299 9
1921	234 0
1922	183 0
1923	184 6
1924	189 6
1925	184 0

(*a*) Proclaimed price. (*b*) Flat rate for all imported butter.

Under contract the British Government purchased the surplus output of Australian butter during the period from 1st July, 1918, to 31st July, 1920. The price paid was 175s. per cwt. for butter scoring 90 points, a shilling per cwt. being added or deducted as the grading score exceeded or fell below that standard. On the 1st August, 1920, the contract was extended for a further period, the price of butter having been increased to 240s. per cwt., subsequently raised to 272s., and the grading price being likewise increased to 1s. 6d. per cwt. This contract terminated on the 31st March, 1921, butter thenceforward being sold in open market.

3. **Cheese.**—The value of cheese imported into the United Kingdom in 1924 was £13,552,406, of which nearly £7 million worth was received from New Zealand, and £5 million worth from Canada. Small experimental shipments from Australia were made in 1908 and following years, fair prices being realized. The value of the imports from Australia has increased from £24,568 in 1913 to £208,630 in 1924.

4. **Bacon and Ham.**—Of a total import of bacon and ham valued in 1924 at £45,059,619, the United Kingdom received imports to the value of £20,317,556 from Denmark, £14,045,261 from the United States, and £5,484,194 from Canada. The import from Australia was small, experimental shipments only having been made during recent years.

5. **Pork.**—The value of the United Kingdom imports of pork (frozen and salted only) was £952,057 in 1924. There was no importation from Australia, the bulk of the supplies being forwarded from the United States, Argentine Republic and Denmark.

6. **Other Products.**—There was practically no shipment to the United Kingdom from Australia of beeswax, poultry, game, lard, or honey, but frozen rabbits to the value of £299,676, and eggs to the value of £73,105 were received from Australia in 1924.

CHAPTER XIX.

FORESTRY.

§ 1. Forestry.

1. **General.**—Economic forestry aims at the preservation and development of existing forest areas by safeguarding against fire and other destructive agencies, by expert supervision of the removal of timber, by judicious thinning, and by reforestation of denuded areas with suitable new growths of local or exotic origin. It provides also for the continuance of an indispensable form of national wealth by the afforestation of available bare lands adapted to the growth of various timbers. Though large areas of virgin forests still remain in Australia, the inroads made by timber-getters, by agriculturists, and by pastoralists—who have destroyed large areas by "ring-barking"—are considerable, and it is not unlikely that climatological changes are caused thereby. It is stated that beneficial consequences follow on the planting of trees on denuded lands, or along eroding coasts, and that a forest-covering beneficially regulates the effects of rainfall.

Successful planting of exotics in various parts of Australia has demonstrated that the climate is suitable for the cultivation of a large number of the most valuable and beautiful of the world's timber trees.

2. **Extent of Forests.**—(i) *Australia.* Scientific surveys of the forests of the various States have not yet been completed, and there are, in consequence, conflicting reports regarding the total forest area of Australia. Expert foresters, however, estimate the forest area possible for permanent reservation at approximately 24,500,000 acres, distributed throughout the States as follows :—

ESTIMATED FOREST AREA—AUSTRALIA, 1924–25.

State.	Total Forest Area.	Percentage on Total Area.
	Acres.	%
New South Wales	8,000,000	4.04
Victoria	5,500,000	9.78
Queensland	6,000,000	1.40
South Australia	500,000	0.21
Western Australia	3,000,000	0.48
Tasmania	1,500,000	8.94
Total	24,500,000	1.29

(ii) *Comparison with other Countries.* The absolute and relative forest areas of Australia and other countries are shown below :—

FOREST LANDS.—RELATIVE AREAS, VARIOUS COUNTRIES.

Country.	Total Wooded Area.	Percentage on Total Area.	Country.	Total Wooded Area.	Percentage on Total Area.
	Sq. Miles.	%		Sq. Miles.	%
Soviet Republics ..	2,662,000	37.81	Norway ..	27,434	21.95
Canada	965,234	26.78	Rumania ..	26,436	21.62
United States ..	724,150	24.35	Italy	21,309	17.81
India (British) ..	228,850	20.91	Spain	18,965	9.74
Sweden	90,889	57.35	Czecho-Slovakia ..	17,996	33.17
Japan	74,019	50.13	New Zealand ..	17,969	17.30
Finland	71,770	55.80	Austria	12,220	37.75
Germany	50,608	26.29	Latvia	7,027	27.70
France	39,873	18.74	Greece	5,844	11.71
Australia	**38,281**	**1.29**	United Kingdom	5,180	3.90
Poland	32,781	21.99			

3. **Distribution.**—The characteristics of the forest areas are given in some detail for each State in Official Year Book No. 6, pp. 446–9. The more conspicuous timber regions of Australia as a whole are the eastern and southern portions, including Tasmania, and the south-western portion northwards and eastwards from Cape Leeuwin. In regard to distribution, on the eastern side of the continent the largest timber is found on the crests and coastal slopes of the mountain ranges, but in the south-west, in addition to the vegetation between mountains and sea, a large area of forest stretches inland from the coastal ranges. The hills encircling Adelaide and Yorke and Eyre Peninsulas also bear good forest. The Kimberley district is timbered, and in the Northern Territory and round the shores of the Gulf of Carpentaria there are considerable forest areas. In the coastal regions of parts of West and North-West Australia, and along the shores of the Great Australian Bight and Encounter Bay, there is little forest. The areas in the centre of the continent are thinly timbered.

Special articles relating to Australian Eucalpytus timbers and the chemical products of Eucalypts will be found in Official Year Book No. 10, pp. 85–98.

§ 2. Forestry Departments.

1. **Functions.**—Each State has organized a separate Department or Commission specially charged with the control and management of the State forests and timber reserves. Extensive survey work is carried on with a view to the classification of forest lands and the proclamation of State forests. The forests are improved by systematic cutting and scientific treatment, by judicious thinning and ringbarking, by the making of roads and the establishment of fire-breaks, and by the removal and destruction of debris, and stunted, diseased or suppressed growth. Provision is made for effective patrols in forest districts to check the ravages caused by fire, often due, it is believed, to carelessness. The training of forest officers, the conduct of research work, and the collection of forestry statistics are also undertaken.

2. Forest Reservations.—At the Interstate Conference on Forestry, held at Hobart in 1920, the forestry authorities of the various States agreed upon the necessity of reserving an area of 24,500,000 acres of indigenous forest lands to meet the future requirements of Australia. This area was distributed among the States as set out in § 1. 2 *ante*.

Having been endorsed by the Premiers' Conference held later in the same year, this area was adopted as the Australian forest ration towards which the authorities are now aiming for permanent reservation. The progress made in the various States to the end of June, 1925, is set out in the following table :—

AREA OF FOREST RESERVATIONS, 30th JUNE, 1925.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Dedicated State forests ..	5,145,957	3,581,388	1,775,309	205,183	134,296	142,327	10,984,460
Timber and fuel reserves ..	1,637,458	749,081	3,246,746	5,578	881,272	1,641,725	8,161,860
Total ..	6,783,415	4,330,469	5,022,055	210,761	1,015,568	1,784,052	19,146,320

The area of State forests reserved in perpetuity amounted in June, 1925, to 10,984,460 acres, or 44.8 per cent. of the quota adopted for Australia, while the timber reserves, which are liable to cancellation, embraced an area of 8,161,860 acres, making a total area of 19,146,320 acres under the control of the Forestry Departments. Of this area a considerable proportion consists of inaccessible mountainous country and cut-over lands, while the Australian quota recommended refers to merchantable forest only. The foresters of Australia are, therefore, faced with a difficult task in improving and preserving the existing forests, and in securing the reservation of further suitable forest country to ensure a permanent supply of accessible timber.

3. Sylvicultural Nurseries and Plantations.—Recognition of the necessity for systematic sylviculture has led to the creation in all of the States of a number of sylvicultural nurseries and plantations. The locality of these establishments, together with a brief statement of the nature of their activities, is given in previous issues of the Year Book. (Reference may be made to Official Year Book No. 6, pp. 451–3.) Details regarding forest plantations and employment are given hereunder :—

SYLVICULTURAL PLANTATIONS AND FORESTRY EMPLOYMENT, 1924–25.

Particulars.		New South Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total.
Total area of Effective Plantations—								
Softwoods ..	Acres	9,461	8,550	538	13,774	1,070	250	33,643
Hardwoods ..	Acres	..	2,160	940	5,781	..	..	8,881
Number of persons employed in Forestry Departments—								
Office Staff ..	No.	32	39	58	9	40	3	181
Field Staff ..	No.	410	127	204	155	213	7	1,116

4. **Revenue and Expenditure.**—The revenue and expenditure of the State Forestry Departments from 1920–21 to 1924–25 are given below :—

FORESTRY DEPARTMENTS.—REVENUE AND EXPENDITURE, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
			REVENUE.		
	£	£	£	£	£
New South Wales	190,742	217,841	168,698	186,393	209,732
Victoria	95,517	155,160	163,076	166,556	162,792
Queensland	145,802	220,950	267,816	227,830	246,641
South Australia	23,872	11,234	8,362	11,110	22,905
Western Australia	58,617	88,529	87,658	127,253	182,764
Tasmania	20,444	18,891	19,346	21,150	20,757
Total	534,994	712,605	714,956	740,292	845,591
			EXPENDITURE.		
	£	£	£	£	£
New South Wales	179,540	186,588	137,108	137,705	153,722
Victoria	71,386	130,076	138,714	160,373	199,575
Queensland	72,718	201,865	158,618	66,670	60,542
South Australia	33,924	36,467	40,822	40,487	43,459
Western Australia	27,632	47,885	38,827	48,333	86,739
Tasmania	2,621	7,069	8,293	8,277	11,435
Total	387,821	609,950	522,382	461,845	555,472

5. **Instruction in Scientific Forestry.**—Forestry schools have been established in New South Wales, Victoria, and Western Australia, in which general scientific instruction is imparted, special attention being paid to forestry. In the classes, theoretical forestry, botany, geology, physics, land surveying, etc., are taught ; while in outside work trainees receive practical instruction in the preparation of seed-beds, seed-sowing, propagation, planting out, pruning, the general care and improvement of plantations and natural forests, and the employment of timber to the best advantage. Courses of lectures are also given at various centres, and, at some of the higher technical schools, members of the forest staffs are afforded opportunities of qualifying in special subjects. It was early realized, however, that a higher national school was necessary for the equipment of foresters fully qualified to undertake every branch of forestry work, and this matter has engaged the attention of the forestry authorities in the various States since 1916. A site for the school was chosen, the curriculum was drawn up, and complete unanimity was arrived at regarding the higher training to be given at the institution, but matters were allowed to remain in abeyance. Early in 1925, however, the Commonwealth Government assumed the responsibility of establishing the institution, and the States agreed to nominate a certain number of students annually. Applicants for entry must have completed a two years' science course at one of the universities. The school, comprising fourteen students, is housed for the first year at Adelaide University, but in March, 1927, it will be transferred to Canberra, the Federal Capital City.

6. **Forest Congresses.**—Interstate Conferences on Forestry were held in 1911 and 1912, chiefly with a view of securing uniformity of management. An International Forest Congress was held at Paris in June, 1913, when a Professor of South Kensington Imperial College represented the Commonwealth Government. The papers and reports dealt chiefly with the threatened shortage of timber, and the measures necessary to avert the danger. An Imperial Forestry Conference was held in London in the summer of 1920, at which also Australia was represented. Important Interstate Forestry Conferences were held in Adelaide in May, 1916 ; at Perth in November, 1917 ; at Hobart in April, 1920 ; at Brisbane in April, 1922, and at Sydney in September, 1924.

§ 3. Production.

1. **Timber.**—Estimates of the quantity and value of local timber sawn and hewn in the sawmills of the various States are given hereunder :—

SAWMILL OUTPUT OF NATIVE TIMBER, 1920–21 TO 1924–25.

State.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.
New South Wales ..	156,112	143,593	147,108	167,493	162,423
Victoria	113,215	112,008	118,336	134,639	114,705
Queensland	(*a*)136,005	(*a*)112,987	(*a*)126,088	(*a*)141,672	(*a*)143,623
South Australia	5,598	3,398	1,187	1,350	3,981
Western Australia (*a*) ..	131,271	163,991	149,158	161,749	189,019
Tasmania	(*a*)59,047	(*a*)54,518	(*a*)45,564	63,120	50,799
Total	601,248	590,495	587,441	670,023	664,550

(*a*) Year ended 31st December.

In addition to the timber shown above for Western Australia, the following quantities were hewn by contractors for the Railway Department, Mines, etc., or were sawn in establishments other than forest sawmills during the past five years :—1920–21, 6,662,144 sup. feet ; 1921–22, 19,672,258 sup. feet ; 1922–23, 29,901,378 sup. feet ; 1923–24, 30,797,419 sup. feet ; and 1924–25, 18,118,199 sup. feet.

2. **Other Forest Products.**—(i) *Eucalyptus Oil.* Oil may be distilled from the foliage of all varieties of eucalyptus, and several of them furnish a product widely known for its commercial and medicinal uses. Complete information regarding Australian production and consumption of eucalyptus oil is not available, but large quantities are manufactured, particularly in Victoria. Oversea exports amounted in 1921–22 to £24,000, in 1922–23 to £33,990, in 1923–24 to £66,339, and in 1924–25 to £75,763, the bulk of the product being shipped from Victoria to the United Kingdom and the United States. Large quantities of the crude oil are used locally in flotation processes at the mines.

(ii) *Tan Barks.* The forests of Australia contain a wealth of tanning materials, all the eucalypts being capable of furnishing a percentage of tannin. The principal source of supply in Australia is obtained from the golden, and the black or green wattle, and in pre-war days the production was more than sufficient for local requirements and an export trade was built up. The supply is, however, diminishing, and since 1920–21 Australia has imported on the average nearly 3,000 tons each year from Natal, where the plantations were originally started from Australian seed. In addition to the wattle bark, a valuable tan bark is obtained from the mallet (*E. occidentalis*) of Western Australia. This bark is not extensively used in Australian tanneries, but is exported to Europe and other countries, where it is used for producing a tannin extract. An investigation of the resources in tanning materials of Western Australia recently completed by the Institute of Science and Industry proved that barks of common trees such as karri, gimlet and ridge-gum, formerly regarded as waste materials, are rich in tannin and excellent tanning agents. Investigations are proceeding in the other States, and additional sources of supply will probably be revealed. In Western Australia, moreover, there are extensive areas of red-gum which exudes considerable quantities of a kino (gum) possessing a very high percentage of tannin. This material has not been very largely used, however, owing to the red colour it imparts to the leather, but this disadvantage has been overcome by the Institute of Science and Industry, which has applied for a patent covering the preparation of the tan solution from raw kino. The production of tan bark in Australia is estimated at about 28,000 tons per annum.

3. **Value of Production.**—Though the valuation of the quantity of firewood consumed in Australia presents serious difficulty, an estimate of the total value of forest production is annually compiled with the following results for the past five years :—

VALUE OF FOREST PRODUCTION.—AUSTRALIA, 1920–21 TO 1924–25.

Production.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	£	£	£	£	£
Total ..	8,877,000	8,998,000	9,344,000	10,292,000	10,577.000

§ 4. Commercial Uses of Principal Australian Timbers.

1. **General.**—The uses of the more important Australian timbers are many and various, and are indicated in previous issues of this work. (See Official Year Book No. 6, pp. 454–6; and Official Year Book No. 10, Section III., § 7 and 8.)

The Commonwealth Government utilizes Australian woods for rifle stocks, telephone switch boards, aeroplane parts, etc. Queensland maple (*Flindersia chatawaiana*) is largely used for rifle stocks, and coachwood is available for the same purpose. Australian timber is also seasoned and stored, depots having been established by the Commonwealth Government at Canberra and Newington in New South Wales, and at Maribyrnong in Victoria; by State Governments at the principal centres; and by private enterprise as required.

2. **Lack of Uniformity in Nomenclature.**—Unfortunately the vernacular names applied to the gums, ironbarks, etc., in the various States, and even in different parts of the same State, do not always refer to identical timbers. The resulting confusion has not only been productive of loss, but it has, to some extent, prejudicially affected the timber trade. This subject is referred to at some length in the special article "Australian Eucalyptus Timbers," in Section III., § 7 and 8, in Official Year Book No. 10. At the Forestry Conferences alluded to above, the matter came up for special consideration, and steps were taken to establish a uniform nomenclature.

§ 5. Oversea Trade.

1. **Imports.**—(i) *Dressed Timber.* The quantity and value of timber imports into Australia during the four years 1921–22 to 1924–25 inclusive are shown according to countries of origin in the following tables :—

DRESSED TIMBER.—IMPORTS, AUSTRALIA, 1921–22 TO 1924–25.

Country of Origin.	Quantity.				Value.			
	1921–22.	1922–23.	1923–24.	1924–25.	1921–22.	1922–23.	1923–24.	1924–25.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom ..	230	625	3,443	1,083	21	33	659	112
Canada	1,761,394	4,119,889	5,112,662	3,122,711	15,218	44,113	59,456	33,733
Other British Countries	4,182	2,995	17,998	109,050	55	124	568	1,363
Norway	13,794,952	49,971,566	38,071,271	41,824,922	242,092	724,507	528,346	605,784
Sweden	9,094,863	30,299,618	46,363,406	25,814,691	120,127	421,307	633,704	306,715
United States ..	2,508,918	7,196,660	8,040,984	15,789,591	34,189	63,998	94,492	173,095
Other Foreign Countrie	67,307	497,096	48,032	39,147	1,998	6,468	1,168	2,004
Total ..	27,231,846	92,088,449	97,657,796	86,701,195	413,700	1,260,550	1,318,393	1,122,806

The figures in the table above are exclusive of items such as architraves, veneers, etc., quantities for which are either not shown, or are expressed in dissimilar units in the Customs entries. The total value of the items so excluded amounted to £122,601 in 1924–25, including plywood, veneered or otherwise, £96,557.

The bulk of the imports of dressed timber comes from Norway, Sweden, and the United States. Practically the whole of this timber consists of softwoods—deal and pine—used for lining, weatherboards, flooring, shelving, doors, box-making, etc.

(ii) *Undressed Timber.* Australian imports of undressed timber for the latest available four years are given hereunder :—

UNDRESSED TIMBER, INCLUDING LOGS (*b*).—IMPORTS, AUSTRALIA, 1921–22 TO 1924–25.

Country of Origin.	Quantity.				Value.			
	1921–22.	1922–23.	1923–24.	1924–25.	1921–22.	1922–23.	1923–24.	1924–25.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom	7,179	28,736	25,226	49,168	259	1,216	1,482	1,183
Canada ..	17,679,952	43,548,208	52,976,045	22,454,122	174,878	314,978	475,450	166,934
India	24,382	62,909	97,869	322,963	482	769	2,693	6,559
Malaya (British)	226,145	237,433	257,560	176,539	1,944	2,057	1,944	1,509
New Zealand ..	49,038,544	42,822,742	42,843,088	44,170,689	660,824	533,962	510,165	594,478
Other British Countries ..	1,854,686	1,699,662	971,622	890,033	13,852	14,471	9,803	9,112
Japan	3,943,538	6,116,548	5,082,326	8,103,367	86,686	130,550	113,196	200,187
Java	*a* 1,051,820	*a* 884,416	*a* 577,930	928,474	*a* 6,753	*a* 8,097	*a* 8,058	10,230
Norway ..	339,185	406,720	1,724,176	3,528,405	14,290	5,761	27,207	37,086
Sweden ..	816,902	3,220,682	6,914,823	5,864,057	10,669	44,012	96,407	61,583
United States ..	98,849,251	169,636,426	226 360,751	219,487,525	998,259	1,665,312	2,762,302	1,921,325
Other Foreign Countries ..	2,668,107	3,871,076	6,147,964	9,963,442	40,962	69,751	67,349	131,229
Total ..	176,499,691	272,535,558	343,979,380	315,938,784	2,009,858	2,790,936	4,076,056	3,141,415

(*a*) Including other Dutch East Indian possessions. (*b*) Exclusive of timber not measured in super. feet.

By far the larger proportion of the undressed timber imports consists of softwoods such as yellow pine, redwood, and oregon from the United States of America and Canada; kauri, rimu, and white pine from New Zealand; pine from Japan, and (prior to the war) red deals from Russia, Norway, and Sweden. Amongst the hardwoods imported, the principal are oak from the United States of America and Japan, and teak from India.

2. Exports.—The quantity and value of undressed timber exported from 1920–21 to 1924–25 are given below, the countries of destination being also shown :—

UNDRESSED TIMBER, INCLUDING LOGS (*a*).—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Country to which Exported.	Quantity.					Value.				
	1920–21	1921–22	1922–23	1923–24	1924–25	1920–21	1921–22	1922–23	1923–24	1924–25
	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	£	£	£	£	£
United Kingdom ..	18,078	8,824	5,731	14,154	17,589	181,451	116,017	75,556	143,443	192,744
Canada	32	136	41	198	201	912	3,030	866	2,915	4,272
Ceylon	340	6,203	1,898	3,222	4,822	3,316	61,759	19,392	30,773	44,798
Egypt	6,890	402	(*b*)	(*b*)	(*b*)	55,800	4,696	(*b*)	(*b*)	(*b*)
Hong Kong ..	395	462	334	..	..	4,954	6,580	3,883	..	..
India	10,220	9,161	2,672	12,588	1,230	88,650	91,358	28,468	125,865	11,274
Malaya (British) ..	..	2	176	..	..	..	24	5,045	..	..
Mauritius	1,834	3,706	2,367	2,835	2,448	22,014	50,591	24,546	29,849	24,152
New Zealand ..	25,354	23,874	24,845	36,349	46,318	459,597	358,960	324,052	510,035	680,802
Pacific Islands—										
Fiji	1,011	845	664	1,130	781	17,238	12,604	10,307	17,407	13,286
Territory of New Guinea ..	158	95	157	213	239	4,254	2,401	2,883	4,572	4,483
Other Islands ..	896	586	474	535	715	20,684	12,597	8,339	10,558	16,520
Papua	189	99	217	316	405	10,990	2,391	3,814	5,347	7,197
South African Union	34,935	37,261	42,370	24,681	51,902	353,424	395,026	472,564	273,713	558,511
Belgium	2,597	1,766	595	716	2,182	24,897	18,790	5,949	7,157	21,819
China	3,420	1,939	3,149	3,695	4	39,682	19,796	27,418	36,951	197
Egypt	..	..	(*c*)1,981	5,341	66	..	..	(*c*)19,963	55,666	664
Japan	625	128	173	116	..	8,380	2,478	2,169	2,100	..
Pacific Islands—										
New Caledonia ..	55	51	32	57	76	1,600	1,234	538	1,034	1,450
Other Islands ..	140	62	63	87	124	3,648	1,426	1,329	1,658	2,079
U.S. of America ..	668	489	439	399	469	17,466	12,550	11,196	9,318	12,169
Other Foreign Countries	380	303	122	276	433	6,126	4,417	1,865	3,587	5,855
Total ..	108,217	96,394	88,500	106,908	130,004	1,325,083	1,178,725	1,050,142	1,271,948	1,602,272

(*a*) Exclusive of timber not measured in super feet. (*b*) Now recorded as a Foreign Country. (*c*) Previously recorded as a British Country.

As the table shows, the bulk of the exports of undressed timber was consigned to South Africa, New Zealand, and the United Kingdom, and consisted largely of the Western Australian hardwoods, jarrah, and karri, which have earned an excellent reputation for such purposes as railway sleepers, harbour works, wood paving, etc.

3. Classification of Imports and Exports.—(i) *General.* The quantities of timber classified according to varieties imported and exported during the year 1924–25 are given in the next table :—

TIMBER, VARIETIES IMPORTED AND EXPORTED.—QUANTITIES, AUSTRALIA 1924–25.

Description.	Unit of Quantity.	Imports.	Exports.	Excess of Imports over Exports.
Dressed	sup. ft.	86,701,195	714,576	85,986,619
Undressed, including logs ..	,,	315,938,784	130,003,571	185,935,213
Architraves, mouldings, etc. ..	lin. ft.	7,300	233,562	— 226,262
Plywood, veneered or otherwise ..	sup. ft.	5,294,469	(b)	(b)
Palings	No.	..	550,551	— 550,551
Pickets	,,	37,938	350	37,588
Shingles	,,	1,145,600	192	1,145,408
Staves—				
Dressed, etc.	,,	242,584	5,756	236,828
Undressed	,,	1,755,937	13,481	1,742,456
Laths—				
For blinds	,,	(a)	(a)	(a)
Other	,,	22,009,103	..	22,009,103
Doors	,,	27,080	(a)	(a)
Wood pulp	ton	12,257	(b)	(b) 12,257
Veneers	—	(a)	(b)	(b)
Spokes, rims, felloes, etc. ..	—	(a)	(a)	(a)
Other	—	(a)	(a)	(a)

(a) Quantity not available. (b) Exports not recorded separately.
NOTE.—The minus sign — denotes an excess of exports.

Similar particulars relative to the values of imports and exports during the year 1924–25 are shown hereunder :—

TIMBER, VARIETIES IMPORTED AND EXPORTED.—VALUES, AUSTRALIA, 1924–25.

Description.	Imports.	Exports.	Excess of Imports over Exports.
	£	£	£
Dressed	1,122,806	17,836	1,104,970
Undressed, including logs	3,141,415	1,602,272	1,539,143
Architraves, mouldings, etc.	81	1,650	— 1,569
Plywood, veneered or otherwise	96,557	(a)	(a) 96,557
Palings	..	7,270	— 7,270
Pickets	307	6	301
Shingles	2,386	4	2,382
Staves—			
Dressed, etc.	3,418	442	2,976
Undressed	24,949	266	24,683
Laths—			
For blinds	10	141	— 131
Other	33,584	..	33,584
Doors	21,756	1,362	20,394
Wood pulp	180,383	(a)	(a) 180,383
Veneers	16,083	(a)	(a) 16,083
Spokes, rims, felloes, etc.	6,089	4,492	1,597
Other	2,449	..	2,449
Total	4,652,273	1,635,741	3,016,532

NOTE.—The minus sign — denotes an excess of exports. (a) Exports not recorded separately.

(ii) *Sandalwood.* A considerable amount of sandalwood is annually exported principally from Western Australia to China, where it is highly prized, and largely used for artistic and ceremonial purposes. Particulars for the past five years are as follows :—

SANDALWOOD.—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Country to which Exported.	Quantity.					Value.				
	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	ton.	ton.	ton.	ton.	ton.	£	£	£	£	£
United Kingdom ..	1	4	..	..	..	110	267	2	..	..
Hong Kong ..	6,495	3,334	4,657	8,894	3,811	111,730	57,714	66,460	222,300	113,551
India	424	333	469	239	406	7,736	6,144	8,131	6,192	11,574
Malaya (British) ..	1,793	228	352	1,404	725	35,191	3,935	5,322	45,118	27,321
Other British Countries	..	2	2	..	..	..	36	30	..	..
China	2,419	575	2,419	3,754	1,722	39,798	7,611	30,876	83,415	53,031
Other Foreign Countries	7	6	..	..	..	136	123	3	..	..
Total ..	11,139	4,482	7,899	14,291	6,664	194,701	75.830	110,824	357,025	205,477

(iii) *Tan Bark.* Tan bark figures both as an export and import in the Australian trade returns, as the following tables show. The first table refers to exports :—

TAN BARK.—EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Country to which Exported.	Quantity.					Value.				
	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	cwt.	cwt.	cwt.	cwt.	cwt.	£	£	£	£	£
United Kingdom ..	360	1	12	..	48	202	1	3	..	48
New Zealand ..	56,360	17,047	12,718	5,278	4,061	39,356	11,927	8,299	3,263	2,372
Other British Possessions ..	100	..	309	..	332	88	..	194	..	170
Germany ..	..	..	..	9,005	36,081	..	..	..	4,983	19,587
Other Foreign Countries	8,400	822	4,490	3,318	2,272	7,084	534	2.220	2,172	1,155
Total ..	65,220	17,870	17,529	17,601	42,794	46,730	12,462	10,716	10,418	23,332

The exports of tan bark from Australia during the past two years consisted largely of mallet bark from Western Australia. The shipments of this bark are not so large as in pre-war days, owing to the cutting out of supplies. This bark is dispatched to Germany, where it is converted into a tannin extract.

A comparison of the imports and exports of tan bark during the last five years is given in the next table :—

TAN BARK.—IMPORTS AND EXPORTS, AUSTRALIA, 1920–21 TO 1924–25.

Particulars.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
	cwt.	cwt.	cwt.	cwt.	cwt.
QUANTITIES—					
Imports	48,100	34,328	93,769	73,941	28,628
Exports	65,220	17,870	17,529	17,601	42,794
Excess of exports over imports	17,120	— 16,458	— 76,240	— 56,340	14,166
	£	£	£	£	£
VALUES—					
Imports	20,002	15,954	37,349	28,672	11,821
Exports	46,730	12,462	10,716	10,418	23,332
Excess of exports over imports	26,728	— 3,492	— 26,633	— 18,254	11,511

NOTE.—The minus sign — denotes excess of imports.

The imports consist almost exclusively of wattle bark from the plantations in South Africa. One variety of Australian wattle is found to flourish in the sandy belts near the coast, but it is the *Acacia decurrens*, var. *mollis*, which is chiefly relied upon for the production of wattle bark in the South African plantations. Seed has been tried from New South Wales, Tasmania, and Victoria, but it is stated that most of the seed is obtained from the best wattle bark areas in eastern Tasmania and western Victoria.

Two reasons are given to account for the success of the industry in South Africa. (*a*) It is found that the treeless, grassy highlands of Natal are specially suitable for wattle culture, and the trees can therefore be grown in rows and economically attended to, while the necessary bark sheds and other appurtenances can be placed in the most advantageous positions. (*b*) There is an abundance of cheap and efficient Hindu labour available for employment on the plantations.

Considerable quantities of tanning substances other than bark are annually imported into the Commonwealth. The total value of the importations in 1924–25 was £73,151, and was composed as follows :—Wattle bark extract, £1,310 ; quebracho extract, £19,344 ; other extract, £21,202 ; and valonia, myrobalans, cutch, etc., £31,295.

FORESTRY IN AUSTRALIA.*

§ 1. General.

1. **Evolution of Scientific Forestry.**—(i) *In Other Lands.* (*a*) *General.* It was by slow degrees only that the countries of the old world developed their forestry systems. Originally tribal common lands for feeding pigs, and hunting country open to all, the forests gradually became preserves of royal houses or of the aristocracy, the people generally being granted merely the right of pasturage. Step by step, as the value of the forests became better known, their use for the production of timber was emphasized, and usages, servitudes, and rights of entry which were opposed to the forestry interests were extinguished. Forestry is the scientific management of forests with a view to the highest sustained yield of timber and various other products. The principle of sustained yield is well established in Europe, and the forest is there regarded as capital, which, if properly managed, will yield its timber interest yearly and in perpetuity. Before this stage was reached, however, much timber was destroyed for the purpose of increasing grazing areas, and when the denudation took place on steep mountain sides, it was generally followed by serious erosion, and by the conversion of perennial streams into intermittent watercourses subject to torrential flows. At the higher levels, destructive avalanches followed the removal of the forest covering. These disasters taught the lesson of the protective value of the forest, and the destruction of timber on high mountains and at the sources of rivers is now prohibited.

(*b*) *France.* A large proportion of the State forests in France now consists of " protection " forests, which, if they yield little return in timber, are of great value to the communities on the plain. The annual expenditure on the reforestation of mountains is the heaviest item in the French forestry budget. Although after the revolution France sold half the 12,000,000 acres of State-owned forests, control even over privately-owned forests is now so strict that the owners are prohibited from clearing. City and country corporations hold 32 per cent. of the total forest area, and the working plans for the management of the forests under their control must be approved by the State Forestry Department. The silting over, due to erosion caused by timber destruction of land in the Pyrenees, Vosges, and Alpine regions, rendered land resumption and reforestation necessary on the low lands as well as on the mountains. The work has been carried out either by the State or by the Communes under the stringent *reboisement* law. The fixing of the shifting sand dunes to the south of the city of Bordeaux was undertaken at the beginning of last century, and, with the co-operation of the Communes no less than a quarter of a million acres of sterile land have been rendered productive. In the last 30 years, plantations have increased the forest area of France by 1,181,000 acres.

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* Contributed by C. E. Lane Poole, Esq. (Diplomé, Nancy), Commonwealth Forestry Adviser, Department of Home and Territories.

(*c*) *Germany.* In Germany, a similar evolution to sound forestry practice has taken place, first, from the tribal forest to the hunting forest in which the tribes were allowed rights of pannage. These rights, with additional grants to religious bodies, persisted, and became serious servitudes which cost a considerable amount of money to extinguish during the last century. The dissipating of the forests synchronized with the growth of agricultural holdings. When the ownership of all forest land was inquired into at the end of the 18th century, it was found that State ownership was small in comparison with the areas held by the aristocracy, by the Communes, and by private people. A policy of repurchase was then embarked upon, and the position was greatly improved, so that before the great war it stood as follows :—The State (including about 3 per cent. Crown forests) owned 33 per cent. of the forests, private owners held 48 per cent., and corporations, etc., owned 19 per cent. The policy in regard to details of management of the Communal forests, differs in each of the States. In some, the direction is by the State Government ; in others, the State contributes to the cost of forestry. Throughout Germany, however, not only are the forests of the State and the Communes under scientific management, but no less than 30 per cent. of the private forests are subject to Government supervision. In certain States, moreover, the appointment is enforced of trained staffs to manage these private forests.

(*d*) *England.* England, in its neglect of forestry, differs from all other European countries. Its island situation, its command of the sea, the close proximity of large supplies of timber, and finally its large industrial population combined to induce an attitude of *laissez-faire* in forestry matters, in spite of the possession of a large area of waste land unsuitable for any purpose but forestry. It was found during the war that all available shipping was required to carry food and munitions, and the dearth of timber supplies was soon acutely felt. After the termination of the war, land was repurchased for forestry purposes, with the object of planting a sufficient area to assure a supply of home-grown timber for three years in the event of another war.

(*e*) *India and Burma.* In India, mainly under the influence of German scientific forest thought, a forest wealth has been built up which in 1923–24 yielded £1,300,000. The Indian forestry service was founded in 1862, and the area under forestry control is now 146,464,000 acres. In Burma the great forests of teak are so managed by qualified European foresters that they continue to yield regular quantities of this valuable timber annually to the whole world.

2. **Requisite Proportion of Forest Area.**—It is generally held that when the proportion of forest in any country falls below 0.86 acres per head of the population, that country will be obliged to import timber. Australia possesses 4.25 acres of forest per head of population, and the excess of imports of timber over exports amounts to 28,000,000 cubic feet. There are two reasons for this excess. In the first place the area of 24,500,000 acres given as the wooded area comprises all forest lands, reproductive or otherwise. The bulk of this area consists of cut-over forests swept by fire at frequent intervals, and the area of really productive forests is not available. Secondly, Australia does not possess a surplus of softwoods, and must, therefore—with the exception of a small quantity produced in Queensland and northern New South Wales—import the bulk of its requirements from overseas. The figure 24,500,000 acres represents the total area that in the estimation of foresters should be reserved for forestry, and taking the factor of 0.86, then, when all the forest area of Australia has been brought under sylvicultural treatment, and is yielding its maximum of hard and soft woods, and none is being imported, the population of Australia would be 21 millions.

§ 2. Forestry Development in Australia.

1. **Progress in Each State.**– In Australia, forestry development has proceeded on very similar lines in each of the States, with the exception of South Australia. As was the case in South Africa, South Australia suffered from a deficiency in the area of indigenous forests, hence, for a generation, that State was forced to lead the way in afforestation policy. What happened in the other States was briefly as follows :—In the pioneering stage, there was wholesale destruction of forests to provide areas for agriculture. The

saw-millers who followed cut down some of the trees and converted them into merchantable timber. Then came the various State land-settlement programmes under which Government departments destroyed forests to make room for immigrants. Finally, a stage was reached when settlement was proved to be impossible on purely forest land, and the scientific forestry era began. South Australia has reached that stage. Western Australia for years has been rapidly exploiting its timber resources, and at the same time promoting land settlement on an extensive scale. Queensland has been exploiting its softwood resources at a rapid rate, and last year was forced to import softwood from overseas. Victoria and New South Wales are both in the stage when land settlement is beginning to take a less important place, and the governments are realizing that there is a considerable amount of land that will yield better returns under timber than under crops or grazing. Sound forestry methods will doubtless be adopted in those States. Tasmania has reached the final stage, and it is acknowledged there that much of the land on which settlement has been attempted is better adapted for forestry. Financial considerations at present will not, however, permit of embarkation on an intensive forestry policy.

While the successive steps just alluded to were being passed through, there was always a Forestry Service in each State. First it was a branch of the Lands Department, then as saw-milling grew in importance, and revenue expanded, and land settlement threatened the timber interests, the Forestry Branch was taken away from the Lands Department and constituted a separate department under another Minister.

The main business of these early departments was the collection of revenue, and policemen, Crown Lands bailiffs, and similar functionaries acted as field officers. They were, of course, not scientific foresters, but simply tax collectors. The administration of the departments was often entrusted to clerical heads, and the Government had not the advantage of technical advice on forestry matters. Forest policy was largely a matter of political expediency. The saw-miller himself was the arbiter in regard to the timber he should cut—a selection system with the exploiter as selector. When differences of opinion arose between the Lands and the Forestry Departments as to the throwing open of land for settlement, the advice of the Lands Department was generally accepted. The opinion of a qualified surveyor on a point of agriculture was naturally regarded as sounder than that of an ex-policeman on a matter of forestry. That each was equally unqualified to give an opinion was of little moment to a Government desirous always of throwing open any land for settlement. Before the final stage was reached, the exhaustion of the forest resources and the dearth of available agricultural land led to strenuous efforts on the part of the powerful Lands Departments to alienate purely forest country. As a rule, therefore, the last stage, viz., the initiation of sound forestry methods, was not arrived at until there was little first-class forest land left in the hands of the Crown, and the question of repurchase had to be considered. Not only did Australia fail to learn the lesson taught by Europe in regard to forest destruction, alienation, and repurchase, but the separate States failed to learn from each other, and serious blunders were made.

The Forest Departments are being strengthened as time goes on, but the dearth of trained foresters is a serious bar to progress. The unqualified heads, or the tax-collecting field officers, are naturally not in a position to initiate scientific methods of management for the State forests, and little progress can therefore be made. There is urgent necessity for the co-ordination of forest control and the provision of organized systems of sylvicultural instruction.

2. **Activities of the Commonwealth Government.**—Forestry was not included amongst the matters transferred by the States to the control of the Commonwealth, and federal supervision, therefore, is restricted to the forests in the Commonwealth Territories. These territories cover a large area, and, with the exception of the Northern Territory, are capable of sound forestry development. It is only during the last few years, however, that any attempt has been made to take stock of the forestry position. Reports have been issued in regard to Papua, New Guinea, the Federal Capital Territory, and Jervis Bay, and a general policy has been drawn up for the management of the forests of

these Territories. So far as co-operation with the States is concerned, there has been progress in a small way in connexion with the investigation of minor forest products. The Commonwealth Institute of Science and Industry, for example, has carried out valuable research work into the pulping qualities of Australian hardwoods and into the tanning qualities of barks and other material. It is proposed to enlarge the work of investigation into minor products, and, through a Forestry Bureau of the Commonwealth Government, to co-operate with the States in major forest work. An Australian Forestry School has been founded, and the Federal Capital Commission has appointed a qualified forester to manage the forests at Canberra and Jervis Bay, while it is anticipated that in both New Guinea and Papua the forests will shortly be placed under technical management.

3. Nature and Extent of Australian Forests.—The wooded area of Australia contains a large number of xerophilous trees and woody shrubs which thrive in regions receiving less than 10 inches of rain per annum. Country devoid of tree growth is rare, the conditions being due to lack of suitable soil rather than lack of rainfall. Sand dunes, rock exposures, and clay pans are the most common treeless areas. A treeless region such as the 300 miles long Nullarbor plain is quite exceptional. There the lack of tree growth is due to the failure of the limestone formation to retain moisture. While, however, the major portion of Australia carries trees, and may be said to be well wooded (the term "desert" applying to relatively small areas only), dense forest is confined to a very narrow fringe. The savannah forests of the interior yield minor products such as sandalwood and tanbarks, but do not produce timber. These open, park-like formations carry only scattered trees of low habit. The bulk of the commercial forest products comes from the thickly-timbered areas comprised in the 30-inch and over rainfall belt south of the Tropics, and the 70-inch and over rainfall belt in the Tropics. The total area is comparatively small, and is confined to the following districts :—(*a*) The coastal belt in the extreme south-west of Western Australia, from a little north of Perth to Albany ; (*b*) the Otway country, in the south of Victoria, and the whole of the south-eastern portion of that State ; (*c*) the mountain forests of Victoria and New South Wales. A forest fringe extends along the coast of New South Wales and Queensland, the rainfall rising from 30 inches in the south and temperate portion to 140 inches in the Tropics. The greater portion of Tasmania receives sufficient rainfall to carry high forest, but a very small area only in South Australia, and practically none in the Northern Territory, are endowed with the necessary rainfall. Edaphic forests occur here and there, and the most important belt is probably that which is to be found on each side of the Murray River in New South Wales and Victoria. Red Gum (*E. rostrata*) is the riverine species. Practically the whole of Papua and New Guinea carry or have carried dense forests, the exceptions being certain small dry belts where the rainfall is less than 70 inches. Norfolk Island was, at one time, covered with a thick jungle.

4. Forest Reserves.—At the Inter-State Conference in Hobart in 1920, the foresters of Australia agreed upon the areas in each State that it was possible to reserve permanently for forestry. The areas were distributed as follows :—

State.	Suggested Forest Reserves.
	Acres.
New South Wales	.. 8,000,000
Victoria	.. 5,500,000
Queensland ..	.. 6,000,000
South Australia ..	.. 500,000
Western Australia ..	.. 3,000,000
Tasmania	.. 1,500,000
Total	.. 24,500,000

The reservations actually made amount to 10,984,460 acres, leaving roughly 14,000,000 acres to be dedicated.

A difficulty common to all States is that the commercial forest area falls within the arable belt, and there is a tendency on the part of those responsible for land settlement to regard all land as potentially agricultural, and to resist attempts made to reserve purely forest land. At the root of the trouble is the inability to realize that forestry is agriculture on a long rotation, and that much land wholly unfit for agriculture is suitable for forestry. Moreover, the wait for returns is so long that it fails to interest the average man and his Parliamentary representative. On the other hand, the enormous area of the Continent seems empty with its 6,000,000 people only, and the cry " We want men, not trees " appeals to the average elector. The destruction over large areas of forest growth to make room for settlement has driven the saw-miller into less commercially accessible forest, so that he now has difficulty in competing against the imported Douglas Fir (Oregon) from U.S.A. or deals from the Baltic. Much of the so-called agricultural area will possibly in years to come revert to the Crown through non-payment of taxes or through repurchase. In the meantime, the forester's work lies in the more remote areas, and on the higher mountains, where, on the one hand, there is less opposition to permanent reservation, and, on the other, the forest conditions are much more difficult, particularly as regards fire control. Even so, the agriculturally sterile Darling Range in Western Australia, which carries magnificent jarrah, still remains unreserved, and the Forestry Department is carrying out sylvicultural work in forests which are not permanently reserved, and are, therefore, subject to alienation.

5. Forest Production.—(i) *General.* While Forestry Departments have been in existence in New South Wales and in Victoria for over a generation, there are, however, no reliable data regarding the yield per acre of the indigenous forests. The increment of the forests is unknown, and forest management is in its infancy. The interests of the saw-miller have been paramount, and the selection system has been governed by his requirements. In the less wealthy States, where forestry practice has been introduced at a later date, the tenets of sound forestry have been better realized, and the necessity appreciated for a thorough training in the profession. Thus, Western Australia, in the south-west, and Queensland in the north-east, are now leading the way in working plans, and very soon satisfactory yield-tables may be expected for their indigenous forests. South Australia, which never boasted large areas of indigenous forests, has laid down what in comparison with the small efforts of the wealthier States is a large area of plantations. Yields per acre are known, and the way is now clear for an extension of coniferous planting, based on the experience of 46 years' continuous work. The value of forest production for the year 1924–1925 was estimated at £10,577,000. This figure represents the value of all timber sold in the round or converted, including an estimate of the value of the firewood used.

(ii) *Common Forest Species.* When the vast number of species of the genus *Eucalyptus* is counted, and to these is added the wealth of tropical and sub-tropical rain-forest species of Queensland and New South Wales, together with the few conifers, the number of common species is too great to allow of separate enumeration within the limits of the present article. All that can be done here is to select the best known from a trade standpoint, at the same time making the proviso that practically no intensive technological work has been carried out, and that many species now considered valueless may in the future find a good market.

In a young country, the value of a timber is generally estimated according to its durability in the ground. Fence posts, house props, and sleepers are wanted, and they must last. Hence, a fine all-round timber like jarrah (*E. marginata*) is relegated to the sleeper-market, and, in consequence, the waste at the saw-mills rises to 70 per cent. while the mill manager cuts his tally of sleepers to fill an overseas order. In another State, blackwood (*Acacia melanoxylon*) is used for fence posts, and red cedar (*Cedrela Toona*) elsewhere is used for outbuildings. A splendid constructional timber like karri (*E. diversicolor*) is condemned as useless because it will not stand in the ground for many years as a sleeper or a house prop, and 6d. a cube is spent to make it durable by a process called " powellizing."

The following is a list of the Australian timbers best known on the local markets:—

(*a*) SCLEROPHYLLOUS FOREST OF THE SOUTH, WEST, AND EAST—MAIN GENUS *Eucalyptus.*

E. *globulus*	Blue Gum
,, *obliqua*	Messmate or Stringy Bark
,, *regnans*	Mountain Ash or Swamp Gum
,, *gigantea* and *E. delegatensis*	Red Mountain Ash, Woollybutt, Gum topped Stringybark
,, *marginata*	Jarrah
,, *diversicolor*	Karri
,, *rostrata*	Murray River Red Gum
,, *capitellata*	Brown Stringybark
,, *sideroxylon*	Red Ironbark
,, *paniculata*	Grey Ironbark
,, *crebra*	Narrow-leafed Ironbark
,, *microcorys*	Tallow Wood
,, *maculata*	Spotted Gum.

CONIFERS.

Callitris & Frenela verrucosa	Cypress Pine
Dacrydium Franklinii (*a*)	Huon Pine
Arthrotaxis selaginoides (*a*)	King William Pine
Phyllocladus rhomboidalis (*a*)	Celery-top Pine.

OTHER.

Acacia melanoxylon	Blackwood
Fagus Cunninghamii	Myrtle
Atherospherma moschata	Sassafras
Banksia sp.	——
Casuarina sp.	Oaks

(*b*) TROPICAL AND SUB-TROPICAL RAIN-FORESTS.—BROAD-LEAVED TREES.

Cedrela Toona var. australis	Cedar
Flindersia Mazlini	Silkwood or Cedar
Flindersia australis	Crows Ash
Flindersia Ifflaiana	Hickory
Gmelina Leichardtii	White Beech
Castanospermum australis	Black Bean
Cryptocarya sp.	Walnut
Syncarpia laurifolia	Turpentine

(*c*) CONIFERS OF THE EAST AND NORTH-EAST.

Araucaria Cunninghamii	Hoop Pine
,, *Bidwilli*	Bunya Pine
Agathis Palmerstoni	Queensland Kauri Pine
Podocarpus elata	Brown Pine

(*a*) Confined to Tasmania.

(d) INTRODUCED SPECIES IN PLANTATION.

Excluding ornamental trees, the introduction of trees for forestry purposes is confined to conifers. South Australia took the first steps in this direction. The following species have been tried there and in other States :—

P. radiata (*syn. insignis*)	Monterey Pine
,, *pinaster* (*syn. maritima*)	Cluster Pine
,, *halepensis*	Jerusalem Pine
,, *canariensis*	Canary Pine
,, *ponderosa*	Yellow or Pondosa Pine
,, *nigra* (*syn. laricio*)	Black Corsican Pine
,, *palustris*	Longleaf Pine
,, *taeda*	Loblolly Pine
,, *muricata*	Bishop's Pine
,, *caribaea*	Slash Pine
Cedrus deodara	Cedar
,, *lebani and atlantica*	,,
Pseudotsuga Douglasii	Douglas Fir or Oregon
Larix europea	Larch
Sequoia gigantea and S. sempervirens	Redwood

Specimens of other pines and of spruce and firs may be seen in botanic gardens and in a few arboreta.

(iii) *Area of Softwood Plantations.* The area of the softwood plantations in Australia is of particular interest, in view of the large imports of these timbers. Queensland has now begun to import softwoods owing to the insufficiency of the local coniferous supply.

AREA OF SOFTWOOD PLANTATIONS.—AUSTRALIA, 1924–1925.

State.	Area in Acres.
New South Wales	9,461
Victoria	8,550
Queensland	538
South Australia	13,774
Western Australia	1,070
Tasmania	250
Total	33,643

The bulk of these plantations consists of Monterey Pine (*P. radiata*), the rapid growth of which makes it a general favourite among arboriculturists.

This comparatively small area evidences the lack of foresight in previous years. The imports of softwoods to Australia in 1924–25 amounted to approximately 30,000,000 cubic feet, valued at £3,400,000, and show the urgent need for developing a home supply.

(iv) *Sawn and Hewn Timber.* While some of the States keep records of the volume of timber in the round that is converted, others furnish data as to sawn and hewn timber only. Thus in 1924–1925 the volume of sawn and hewn timber produced in each State was as follows :—

State.	Cubic Feet to Sawn and Hewn Timber. 000 omitted.	
New South Wales	13,535	
Victoria	9,559	
Queensland	11,968	
South Australia	332	(includes pine converted from plantations)
Western Australia	15,752	
Tasmania	4,233	
Total	55,379	

(v) *Mining Timber, Telegraph Poles, etc.* Figures in regard to production are not complete for all States, but there is a heavy drain on the forests for this class of timber, and frequently trees which if left to mature would provide quantities of valuable milling timber are sacrificed to make mine props, telegraph poles, or piles for harbour works. Marking of timber for felling is gradually being introduced, and this practice will result finally in the thinnings only being used for the purposes mentioned.

(vi) *Firewood.* The figures in regard to production of wood fuel are unsatisfactory. Except in the larger cities, wood is the common domestic fuel throughout Australia, but, while some important industries, such as the gold-mining industry in Kalgoorlie furnish accurate data, in other areas the production figures are purely estimates.

In 1923–1924, New South Wales used 18,054,500 cubic feet of wood fuel, or approximately 8 cubic feet per head of population, which, allowing for the coal used, appears small. Victoria used 20,140,000 cubic feet in 1920, or about 13 cubic feet per capita. Figures are not available for South Australia, Tasmania, and Queensland. Western Australia gives an accurate return of the wood fuel used on the principal mining fields to raise steam, etc. This amounted in 1920 to 708,146 tons and in 1925 to 555,573 tons, or approximately 18,315,000 cubic feet. No estimate is, however, made in regard to the domestic consumption of wood fuel, while the figures quoted respecting mine consumption are incomplete owing to the absence of information from some areas.

(vii) *Sandalwood.* Australia exports annually a considerable quantity of sandalwood, principally to China, where it is mostly converted into joss sticks, although larger pieces are used to make various ornaments. Western Australia supplies the bulk of the exports. Thus in 1924–25, out of a total of 6,664 tons valued at £205,477, 6,243 tons were exported from Western Australia, and the remaining 421 tons were exported from Queensland. In Western Australia there are sandalwood oil distilleries, in which during 1923–24, 463 tons of wood were utilized, while £39,873 worth of oil was exported.

(viii) *Tan Barks.* The situation in Australia in regard to tan barks is peculiar, inasmuch as supplies of wattle bark are now drawn from South Africa. The wattle established there is *Acacia decurrens var. mollissima*, and is indigenous to Victoria, New South Wales, South Australia, and Tasmania. Seeds of this tree were tried some years ago in South Africa, and thrived so well that plantations were made in Natal, with the result that Australia now annually imports some 3,000 tons from this source. The estimated production of tan barks in Australia is 28,000 tons.

Figures showing imports, exports, and excess of imports of tan bark during each of the last three years are given hereunder :—

TAN BARK—TRADE IN, AUSTRALIA, 1922 TO 1925.

Year.	Imports.		Exports.		Excess of Imports.	
	cwt.	£	Cwt.	£	Cwt.	£
1921–22 ..	34,328	15,954	17,870	12,462	16,458	3,492
1922–23 ..	93,769	37,349	17,529	10,716	76,240	26,633
1923–24 ..	73,941	28,672	17,601	10,418	56,340	18,254
1924–25 ..	23,628	11,821	42,794	23,332	−14,166	−11,511

NOTE.—The minus sign — denotes excess of exports.

As the figures show, there is an export of bark in each year as well as an import. In pre-war days and during the past two years the export consists largely of mallet bark from Western Australia. This bark is not so " kind " as wattle bark, and is therefore not used extensively in Australian tanneries, but is exported to Europe and other countries, where it is used for producing a tannin extract.

The statistics of imports do not give tannin extracts separately, so that it is impossible to apportion the value which should be added to that of the bark imports to arrive at the total local requirements. It is not known, moreover, to what extent mallet bark enters into the manufacture of the extracts imported.

A survey of the tannin-producing materials of Australia is being conducted by the Institute of Science and Industry, and, already, several barks have been found valuable, among them—ridge gum (*E. alba*), which is indigenous in Northern Australia and Papua, promises to become a commercial product.

(ix) *Eucalyptus Oil.* The distillation of eucalyptus oil is mainly carried on in Victoria and Tasmania. The oversea exports thereof during the last three years were valued as follows :—

EUCALYPTUS OIL EXPORTS—AUSTRALIA, 1922 TO 1925.

Year.	Value
1921–22	£24,000
1922–23	£33,900
1923–24	£66,339
1924–25	£75,763

It may be noted also that large quantities of the crude oil are used locally in flotation processes on the mines.

(x) *Gums, Kinos, and Resins.* A variety of gums, kinos, and resins is obtainable in Australian forests, but with the exception of grass-tree gum, which is exported from South Australia and other States, there is very little trade in these minor products. The gum of several species of wattle is used as a substitute for gum arabic. The kino that exudes from Marri (*E. callophylla*) found in Western Australia, carries a heavy percentage of tannin, but, owing to the difficulty of decolourizing it, it is not used commercially to any great extent.

§ 3. Oversea Trade in Forestry Products.

An examination of the oversea trade returns shows that Australian imports of dressed timber come chiefly from Norway and Sweden. The main supplies of undressed timber are of American origin, the United States contributing more than 18 million cubic feet in 1924–25 and Canada 2 million cubic feet. New Zealand contributed 3¾ million cubic feet, while Japan and Sweden are together responsible for a million feet. Then come Norway, Java, Malaya, India, and lastly, the United Kingdom, which sent 2,500 cubic feet, probably re-exports of cabinet woods. This large importation of timber, amounting to 26⅓ million cubic feet, valued at £3,000,000, consists mainly of soft woods. A certain quantity of cabinet woods reaches Australia, and Japan sends oak as well as pine; but 97 per cent. of the importation is derived from coniferous timber. New Zealand sends white pine for butter boxes, etc., and kauri. Canada and America send Douglas fir, redwood, yellow pine, etc., and red and white deals reach Australia from Norway and Sweden.

Australian exports of undressed timber amounted in 1924–25 to 11,000,000 cubic feet, mainly exported from Western Australia, the other States participating to the extent of 3½ million cubic feet only. Without Western Australia's timber, the balance of imports would be extremely heavy. As it is, it amounted to over £3,000,000 in 1924–25. The Western Australian exports consist mainly of sleepers and railway scantling. Jarrah (*E. marginata*) is the principal timber exported, although karri (*E. diversicolor*) figures largely in the returns. The last-mentioned timber requires treating to render it durable, and is subjected to the process known as "powellizing." In three items only—architraves, palings, and laths—is there a balance of exports over imports, but the value is only £8,970.

Australian imports of paper and stationery in 1924–25 amounted to £6,845,778. The investigations by the Institute of Science and Industry into the pulping qualities of Australian hardwoods have shown that paper can be made therefrom on a commercial scale, and it is anticipated that private enterprise will embark on this industry. Not only would the paper-pulping industry help to adjust the balance of trade, but it would prove of great assistance to the forester, who at present finds it very difficult to dispose of thinnings.

§ 4. Activities of Forestry Departments.

1. **General.**—Apart from the collection of revenue from rents, royalties, etc., sylvicultural operations having for their object the improvement of existing stands of timber and the regeneration of cut-over areas have been undertaken in all States. At first, through lack of knowledge of forestry, these operations were carried out on expensive and unsatisfactory lines, and tended to retard rather than to hasten forest growth. A large amount of money was spent on the cleaning up of the forest floor, the field officers trying, as it were, to convert the forests into park lands. This destruction of shade-supplying soil-cover had a very harmful effect on the forests. Moreover, large sums were spent in Victoria and in New South Wales on thinning the forests in such a manner as to get a minimum of good timber in a maximum of time. The stems, rather than the crowns, were taken as the guide to the operation, and useful trees were removed at a high cost per acre, while no attempt was made to help the others in their fight for existence. These cleaned-up forests looked well, and photographs before and after thinning and floor cleaning impressed the uninitiated. With the advent of technically-trained foresters, sounder methods were instituted, and the field officers began to learn what scientific forestry means. The need of qualified men is, however, still pressing; progress is slow, and in places the old methods of so-called sylviculture are still in operation.

2. **Officers Employed.**—Some idea of the difficulties in effective administration confronting the Forestry Departments may be gathered from the following statement in regard to the number of fully qualified forestry officers in each State, and in the Commonwealth Forestry Department:—New South Wales, nil; Victoria, 2; Queensland, 1; South Australia, 3; Western Australia, 8; Tasmania, nil; Commonwealth, 3; total, 17

The establishment of efficient working plans is gradually taking shape, and systematic marking of trees for the mill or the hewer has been initiated. It is now recognized that it should not be left to the timber exploiter to decide what timber is to be cut, and what is to be reserved for future generations. Group selection methods of regeneration and sound forestry practice have been introduced in Western Australia, which State, as mentioned above, has the advantage of the largest number of technically-trained officers in the field.

The total number of employees in the various State Forestry Departments is as follows:—New South Wales, 442; Victoria, 166; Queensland, 262; South Australia, 164; Western Australia, 253; and Tasmania, 10.

3. **Inquiries by Tariff Board.**—During the course of the Tariff Board's inquiry into the subject of reforestation, officials of the States Forest Departments advocated the granting by the Federal Government of a subsidy to the States in the form of annual payments. In addition, an application was made on behalf of a proposed South Australian company, which, it was stated, intended to carry out afforestation on an extensive scale, for concessions in regard to Federal Land Tax on all areas planted, and a bounty on an acreage basis.

The destruction of indigenous forests, coupled with the failure to take adequate measures for reforestation, have at various times aroused emphatic protests. During the Board's investigations in connexion with timber duties, this subject was regarded as of national importance, and the opinion was expressed that both the Federal and State Governments should take steps to prevent the possible extinction of a great source of national wealth. Moreover, when the Inter-State Commission was dealing with the timber industry, in 1914–15, the subject of reforestation was brought forward, and was referred to as demanding immediate attention.

The Tariff Board advocated a conference between the Federal and State Governments, with a view to arriving at a common policy of afforestation either by co-operation between the Commonwealth and the States, or by the assumption by the Commonwealth—with the concurrence of the States—of responsibility for the protection and rehabilitation of the timber resources of Australia.

4. **Forestry Education.**—The urgent need for trained foresters has already been stressed. At each Inter-State Forestry Conference since 1917 the desirability was urged of establishing one first-rate school for the whole Commonwealth. All the State Departments were in agreement on the matter, but Governments did not take the necessary steps, and, although a site was chosen and the contribution from each State was fixed, the National School was not founded. The Commonwealth Government, therefore, has assumed the responsibility of establishing the institution and paying the teaching staff, while the States have agreed to nominate a certain number of students annually. Applicants for entry to the Australian Forestry School must have completed a two years' science course at one of the universities. It is anticipated that the institution will supply the States with foresters qualified to undertake all necessary forestry work, and that it will constitute a nucleus of forest knowledge designed to develop on sound lines the sylviculture of Australia. The School is housed for the first year at the Adelaide University, but in March, 1927, it will be transferred to Canberra, the Federal capital city. The first students enrolled numbered eighteen. New South Wales, Victoria, and Western Australia all possess forestry schools which have served a useful purpose in supplying training to the field staffs. The standard, however, was not sufficiently high to turn out fully-qualified forestry officers, while it was perhaps a little too high for the ordinary officer. With the establishment of the Australian Forestry School, the usefulness of these schools will be increased, and their functions and standards can be more definitely fixed.

§ 5. Forestry Legislation.

The laws governing the exploitation of Australian timber resources have been determined by the needs of the community. Originally the matter resolved itself into the securing of a revenue to the States from persons authorized to remove timber from Crown lands. A licence system was inaugurated under which persons engaged in the business paid fees and obtained permits covering a certain period. As time went on, and the demand for timber increased, saw-mills were established in greater number, and permits were issued covering long periods. In some cases, concessions were granted over very long terms. The apparent object of the legislation was to assist the saw-miller to exploit as much as possible as quickly as possible. This state of affairs persisted until the vested interests created began to diminish in power and influence, and readily exploitable timber became so scarce as to make saw-milling on a large scale a hazardous undertaking. The small saw-miller then came to the fore again, and competition enabled the State to derive greater revenue from fees and charges. The rapid exhaustion of the timber supplies, and the outcry raised against land settlement in forest country, finally caused the legislatures to pass long overdue Forestry Acts, with the object of conserving and regenerating their forest resources. It is to be feared, however, that in consequence of the lack of expert advice, much of the legislation failed to achieve its purpose.

The Acts provided for various methods of control and administration, but it is to Western Australia that the credit is due of introducing the important principle of the inviolability of a forestry working plan. A scientific working plan connotes a detailed scheme under which the forest area is to be worked for a period of years, and, to be effective, its continuity must be safeguarded by legislation. This safeguard was provided in the Western Australian Act, and has since been introduced in the Forestry Acts of Victoria and Tasmania. Next in importance is the provision of funds to enable the forest work to be carried on continuously. There is a natural aversion from the making of a present sacrifice for the benefit of future generations, and it is therefore necessary to provide the requisite funds by special legislation. Thus, in New South Wales and Tasmania there is provision for placing half the timber revenue in a special fund to be expended on forestry purposes only. Victoria also provides for a special forestry fund. Western Australia provides that three-fifths of the net timber revenue is to be expended on forestry. Queensland and South Australia, however, rely on annual appropriations in the estimates. In some States the policy has been initiated of bringing about the permanent dedication of land to forest purposes by giving the Government power under a Forestry Act to dedicate a prescribed area within a certain period. This has in some instances had the unfortunate result that useless land from a forestry standpoint has been hurriedly dedicated to conform with the provisions of the Act.

Provision is also made to protect dedicated forest land, thereby making its alienation difficult. As a rule, an amending Act or a motion by both Houses of Parliament is required to revoke the dedication of a forest reserve.

Regulations under the Queensland Act provide for the sale of forest produce by auction or tender. A similar proviso was introduced into the Western Australian regulations, and later on was adopted by New South Wales. A fair price is thereby ensured to the State for its timber and other forest products. The licence system is admissible only in the case of scattered products, such as tan barks or gums, where the expense of supervision of exploitation would be prohibitive. Wherever close supervision is possible, it is more advantageous to sell the forest products at the best price obtainable, and this is most satisfactorily ascertainable by the tender or the auction system.

§ 6. Fire Control.

Fire control constitutes a very serious problem, and clauses have been inserted from time to time in proposed Forestry Bills to prohibit the setting fire to forests and to provide for assistance to extinguish fires when discovered. Parliaments invariably have refused assent to such clauses. In Western Australia, however, good results have been arrived at by introducing stringent measures of protection under the Bush Fires Act. In declared areas in this State fires cannot be lit unless a permit has been obtained. Effective fire control, however, depends on skilled attention to the forest rather than on legislation. Where the forests are scientifically managed, with foresters resident therein, and skilled employees engaged in sylvicultural work, the danger of fire is reduced to one of simple control. The dissipation of departmental resources over a wide area, instead of being concentrated on the forests that are being scientifically worked, is largely responsible for the damage to forests by fire. Western Australia, owing to well-organized forest control, lost a negligible area of forest in 1926, but the loss sustained by both New South Wales and by Victoria was serious, and included large areas of coniferous plantations, as well as hardwood forests which had been sylviculturally treated at great expense.

CHAPTER XX.

FISHERIES.*

§ 1. General.

1. **Fish Stocks.**—Australia possesses an abundant and varied fish fauna, which embraces both tropical and temperate varieties and includes destructive as well as valuable species. In rivers and lakes both indigenous and imported varieties thrive. The latter have been introduced and acclimatized for industrial and sporting purposes by Governments and angling societies. Exploitation of the fishing areas—for some classes of fish for the whole year, for others during the breeding season only, or until a certain size is attained—is, where necessary, forbidden; proclaimed localities are closed against net-fishing, and a minimum size of mesh for nets is fixed. The sea-fishermen in some districts have made regulations in their own interests for the purpose of controlling the market supply.

2. **Progress of Industry.**—(i) *Transport and Marketing.* Despite the abundance of edible fish, the progress of the fishery industry in Australia has been slow, and transport and marketing of the proved supplies have not been satisfactorily dealt with.

In New South Wales, as shown in § 5 herein and § 6 of this Chapter in Official Year Book No. 17, the matter of exploiting trawlable fish was undertaken by the State Government, which also took steps to improve the conditions under which ordinary coastal fishing is carried on. In Queensland, State trawling was undertaken in 1919, and good trawling areas have been located and charted between Cape Moreton and Caloundra.

(ii) *Economic Investigations.* Although valuable work has been done by the State Governments in the way of experiment and culture, a uniform policy of development for Australia is desirable, and recommendations have been made that the Fisheries Departments of the various States should co-operate with the Federal Government with a view to increasing the productiveness of Australian waters, and bringing about uniformity in fisheries laws. All live fish imported into Australia are examined on shipboard in order to prevent the importation of undesirable fish. With the object of ascertaining the movements of oceanic fishes, and of estuarine fishes which make periodical oceanic migrations, reports are furnished regarding the various kinds of fishes, etc., and their movements along the coast. Details regarding the activities of the States in fish-culture were given in Official Year Book No. 6, pp. 471–2. By arrangement with the Commonwealth Fisheries Department some years ago members of the staff of the Australian Museum, Sydney, accompanied the F.I.S. *Endeavour* on various cruises. Specimens were collected, mounted for scientific purposes, and distributed to other Australian Museums, a considerable number being put aside for the Commonwealth Fishery Museum. As pointed out in § 4, however, this vessel was lost with all hands in 1914, and has not since been replaced.

3. **Consumption of Fish.**—It has been said that the Australians are not an "ichthyophagous" race, seeing that the annual consumption of fish per head of population in Great Britain is set down at 42 lbs., while in Australia it has been estimated at only 13 lbs. The heavy imports of dried and preserved fish indicate, however, that there is scope for the development of the industry, which now seems to be ill-managed, the price to the consumer being high, while the fisherman's gain is uncertain, and the system of distribution lacks method.

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* A specially contributed article dealing with the Marine and Fresh Water Fisheries of Australia appeared as § 6 of this Chapter in Official Year Book No. 17 (*vide* pp. 752 to 767 therein).

4. Oyster Fisheries.—Natural oyster beds exist on the foreshores in the shallow waters of inlets and estuaries in several parts of Australia. By husbanding the natural crop, and by judicious transplanting, the output has been very materially augumented. The areas are leased by the Government to private persons, lengths of foreshore being taken up under oyster leases. In New South Wales and Queensland the industry has thriven, and small yields are obtained in South Australia, Victoria, and Tasmania.

5. Pearl-Shell, Pearls, Bêche-de-Mer, etc.—(i) *General.* Pearl-shelling is carried on in the tropical waters of Queensland, the Northern Territory, and Western Australia. The pearl-oyster inhabits the northern and western coastal waters from Cape York to Shark Bay, a length of shore of over 2,000 miles. The shells are marketed in considerable quantities, and pearls also are obtained in Queensland, Western Australia and the Northern Territory. The fishing is generally conducted with the aid of diving apparatus in water varying from 4 to 20 fathoms in depth. In Queensland and the Northern Territory the bêche-de-mer industry is carried on, and tortoise-shell is obtained on the coasts. Experiments have been made in cultivating the pearl-oyster on suitable banks. In October, 1911, a pearl weighing 178 grains, and valued at £3,000, was obtained at Broome. Further details regarding pearl-shelling are given in Official Year Book No. 6, p. 463. Trochus-shell to the value of £23,142 and £47,892 was exported from Australia during 1923-24 and 1924–25.

(ii) *Royal Commission on Pearl-shelling Industry.* In accordance with the "White Australia" policy it was originally determined that the employment of Asiatic labour in the pearl-shelling industry should be restricted, and ultimately cease, and is was proposed that after 31st December, 1913, permits to bring in Asiatics for the pearling-fleet should no longer be issued. In view, however, of the disorganization of the industry occasioned by the war, the time was extended to the 30th June, 1918, after which date permits to introduce Asiatic labour were to be granted only in cases where the diver and tender of a boat were Europeans. The Royal Commission appointed in March, 1912, presented its final report in 1916. The Commissioners stated that, though it might be practicable, they did not consider it advisable or profitable to attempt to transfer the industry from Asiatics to Europeans. They further stated that, while the labour now employed is almost entirely Asiatic, they did not consider that the "White Australia" policy would be weakened or imperilled by allowing the industry to continue as at present conducted.

§ 2. The Fishery Industry.

1. Boats and Men Engaged, and Take.—(i) *General Fisheries.* The returns have been compiled from particulars supplied by the State Departments, and while the data do not generally lend themselves to presentation on a uniform basis, the principal facts have been incorporated in the tables hereunder :—

GENERAL FISHERIES, 1924.

State or Territory.	No. of Boats Engaged.	Value of Boats and Equipment.	No. of Men Employed.	Total Take of— Fish.	Total Take of— Spiny Lobster (Crayfish).	Value of Take. Fish.	Value of Take. Spiny Lobster (Crayfish).
	No.	£	No.	cwt.	doz.	£	£
New South Wales ..	1,723	131,428	3,289	165,778	7,206	522,201	*c* 47,417
Victoria (*e*) ..	857	108,658	1,267	90,063	20,827	144,582	18,664
Queensland ..	630	47,105	1,199	56,820	..	124,379	*f* 2,909
South Australia ..	750	45,000	1,265	(*a*)	(*a*)	*b*126,500	(*a*)
Western Australia ..	252	33,582	497	27,252	9,106	76,307	4,553
Tasmania (*d*) ..	131	18,300	354	doz.33,841	8,675	9,048	2,350
Northern Territory	3	(*a*)	14	1,480	..	5,525	..
Total (*d*) ..	4,346	384,073	7,885	..	45,814	1,008,542	75,893

(*a*) Not available. (*b*) Estimate. (*c*) Including £38,200, the value of 5.324 cwt. prawns and 3,682 dozen crabs. (*d*) Incomplete. (*e*) Year ended 30th June, 1925. (*f*) Crabs.

Returns for the past five years are given in the table below :—

GENERAL FISHERIES.—AUSTRALIA, 1920 TO 1924.

Particulars.		1920.	1921.	1922.	1923.	1924.
No. of boats engaged ..	..	3,624	3,684	3,873	3,776	4,346
No. of men employed ..	..	7,634	7,846	7,771	7,422	7,885
Fish obtained—						
Quantity	cwt.	*a*397,250	*a*377,614	*a*350,350	*a*319,148	*a*345,012
Value	£	*a*689,568	*a*708,670	*a*793,263	*a*845,354	*a*882,042
Lobsters obtained—Value	£	*a*44,885	*a*43,329	*a*54,796	*a*59,862	*a*75,893

(*a*) Exclusive of South Australia.

(ii) *Edible Oyster Fisheries.* The returns from oyster fisheries are given in the next table.

EDIBLE OYSTER FISHERIES, 1924.

State or Territory.	Number of Boats Engaged.	Value of Boats and Equipment.	Number of Men Employed.	Number of Leases.	Oysters Taken.	
					Quantity.	Value.
	No.	£	No.	No.	cwt.	£
New South Wales	611	27,048	593	4,502	49,412	85,140
Victoria (*b*)	32	4,995	84	8	2,478	3,965
Queensland	81	8,395	125	561	15,412	24,518
South Australia (*c*)	..	..	..	..	..	..
Western Australia	1	(*a*)	3	2	..	..
Tasmania	4	600	19	..	420,000 (doz.)	*d* 4,940
Total	729	41,038	824	5,073	..	118,563

(*a*) Not available. (*b*) Year ended 30th June, 1925. (*c*) Included with General Fisheries. (*d*) Including £4,100, value of scallops.

Returns for Australia for the last five years are given in the appended table :—

EDIBLE OYSTER FISHERIES.—(c) AUSTRALIA, 1920 TO 1924.

Particulars.		1920.	1921.	1922.(*a*)	1923.(*a*)	1924.(*a*)
No. of boats engaged ..		(*b*) 532	(*b*) 591	624	694	725
No. of men employed ..		(*b*) 539	(*b*) 602	667	768	805
Oysters obtained—						
Quantity ..	cwt.	72,767	63,804	68,516	76,857	67,302
Value.. ..	£	108,694	96,808	110,305	122,874	113,623

(*a*) Exclusive of Tasmania. (*b*) Exclusive of Victoria. (*c*) Exclusive of South Australia.

(iii) *Pearls, Pearl-shell and Trepang.*—Figures regarding the production, trade, etc., for these items, so far as they are ascertainable, are given hereunder. As regards pearls, for obvious reasons no correct estimate can be obtained of the value of those found. Pearl-shell (*Margaritifera*) is widely distributed in North Australian waters over an area facing some thousands of miles of coastline, though not intensively over the whole distance. The north-west beds are the most prolific, but those around and to the north of Cape York are also of importance. There is need for further investigation into the occurrence of this valuable shell, as well as of trochus, green snail, window-pane shell (*Placuna*), the various types of trepang or bêche-de-mer (*Holothuria*), both in tropical Australian waters and in those of Papua and the mandated area of New Guinea. Particulars as returned for the year 1924 are as follows :—

PEARL, PEARL-SHELL, AND BÊCHE-DE-MER FISHERIES, (*a*), 1924.

State or Territory.	Number of Boats Engaged.	Value of Boats and Equipment.	Number of Men Employed.	Quantity of Pearl-shell obtained.	Value of Pearl shell obtained.	Value of Pearls obtained.	Value of Bêche-de-mer obtained.	Value of Tortoise-shell obtained.
	No.	£	No.	Tons.	£	£	£	£
Queensland ..	153	70,000	1,444	1,245	200,334	(*b*)	23,548	986
Western Australia ..	229	124,677	1,599	1,525	241,830	59,470	223	..
Northern Territory	5	(*b*)	(*b*)	14	2,070	200	1,986	60
Australia ..	387	194,677	3,043	2,784	444,234	59,670	25,757	1,046

(*a*) No pearl-shelling industry in New South Wales, Victoria, South Australia, and Tasmania. (*b*) Not available.

The figures for tortoise-shell and trochus-shell as returned are defective, as the necessary information is not collected in full detail. In the following summary of production during the past five years, export figures of Australian origin are inserted for both of these items :—

PEARL, PEARL-SHELL, AND BÊCHE-DE-MER FISHERIES.—AUSTRALIA, 1920 TO 1924.

Particulars.		1920.	1921.	1922.	1923.	1924.
No. of boats engaged ..		515	334	356	388	387
No. of men employed ..		3,738	2,403	2,639	3,005	3,043
Pearl-shell obtained—						
Quantity ..	tons	2,126	1,422	2,271	2,292	2,784
Value	£	337,917	189,276	303,452	288,689	444,234
Pearls obtained (*a*)—						
Value	£	68,610	36,163	38,163	60,717	59,670
Bêche-de-mer obtained—						
Quantity ..	tons	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)
Value	£	70,898	52,201	65,679	33,370	25,757
Tortoise-shell exported—						
Value	£	1,864	1,243	2,012	2,574	2,025
Trochus-shell exported—						
Value	£	37,602	26,285	25,095	23,142	47,892

(*a*) Incomplete ; as returned. (*b*) Not returned.

2. **Fish Preserving.**—To encourage the industry, the Federal Parliament provided a bounty of ½d. per lb. for fish preserved as prescribed during the ten years 1907–8 to 1916–17. The payment, which amounted to only £3,005 during the period, or at the rate of £300 per annum, failed to develop the industry, and the bounty was not renewed on its expiration in 1916–17.

3. **State Revenue from Fisheries.**—The revenue from fisheries in each State during the year 1924 is given hereunder :—

FISHERIES.—REVENUE, 1924.

State or Territory.	Licences.	Leases.	Fines and Forfeitures.	Other Sources.	Total.
	£	£	£	£	£
New South Wales ..	1,452	11,629	521	546	14,148
Victoria (*a*)	606	41	110	3	760
Queensland	1,697	2,884	92	9	4,682
South Australia	1,070	..	..	..	1,070
Western Australia ..	3,937	1,389	180	327	5,833
Tasmania	765	1	115	20	901
Northern Territory ..	24	..	..	..	24
Total	9,551	15,944	1,018	905	27,418

(*a*) Year ended 30th June, 1925.

Similar particulars for Australia for the last five years are given in the following table :—

FISHERIES.—REVENUE, AUSTRALIA, 1920 TO 1924.

Particulars.	1920.	1921.	1922.	1923.	1924.
	£	£	£	£	£
Licences	11,760	9,164	9,092	10,013	9,551
Leases	13,432	13,106	14,181	13,419	15,944
Fines and Forfeitures ..	536	472	663	1,029	1,018
Other Sources	524	586	1,076	3,170	905
Total	26,252	23,328	25,012	27,631	27,418

§ 3. Oversea Trade in Fishery Products.

1. **Imports of Fish.**—The development of the local fishing industry leaves much to be desired, as is evident from the large imports. For the last five years the imports were as follows :—

FISH.—IMPORTS, AUSTRALIA, 1920-21 TO 1924-25.

Classification.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Fresh (oysters) ..	cwt.	2,092	2,297	2,927	415	1,646
	£	2,708	3,675	4,091	301	1,222
Fresh, or preserved by cold process	cwt.	17,558	25,130	38,508	50,718	64,409
	£	81,126	107,999	127,172	165,948	197,690
Potted	cwt.	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)
	£	64,310	72,788	69,422	101,085	110,347
Preserved in tins	cwt.	103,505	163,034	175,322	233,318	226,263
	£	649,610	885,781	867,708	1,158,048	1,120,428
Smoked, dried, and n.e.i.	cwt.	10,179	13,170	13,633	15,592	13,815
	£	25,774	59,038	56,190	63,167	51,831
Total	cwt. (*b*)	133,334	203,631	230,390	300,043	306,133
	£	850,528	1,129,281	1,124,583	1,488,549	1,481,518

(*a*) Not available. (*b*) Exclusive of potted fish.

Tinned fish constitutes by far the largest proportion of the imports, most of it consisting of salmon from the United States of America, Canada, Norway, Alaska, and the United Kingdom. The potted fish comes chiefly from the United Kingdom, while the same country supplied the largest proportion of the fresh fish in 1924-25, the bulk of the remainder coming from the New Zealand and South African Union. The small import of oysters is supplied by New Zealand.

2. **Exports of Fish.**—The exports of local fish produce for the five years 1920-21 to 1924–25 are given hereunder :—

FISH (AUSTRALIAN PRODUCE).—EXPORTS, 1920-21 TO 1924-25.

Classification.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Fish, fresh, smoked, or preserved by cold process	cwt.	10,193	9,865	9,692	5,681	3,449
	£	86,474	89,095	66,104	33,259	23,710
Preserved, in tins, dried, salted, etc.	cwt.	102	78	162	476	386
	£	195	306	433	1,185	1,401
Total ..	cwt.	10,295	9,943	9,854	6,157	3,835
	£	86,669	89,401	66,537	34,444	25,111

The quantity of fresh fish exported from Australia is trifling, and the amount of £23,710 shown in the table above consists chiefly of cured bêche-de-mer exported to Hong Kong from Queensland.

3. Exports of Pearl and Other Shell.—The exports of pearl, tortoise, and trochus-shell, of Australian origin, are given hereunder for the five years 1920–21 to 1924–25 :

PEARL, TORTOISE, AND TROCHUS-SHELL.—EXPORTS, AUSTRALIA, 1920-21 TO 1924-25.

Article.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Pearl-shell ..	cwt.	31,480	38,900	41,027	48,017	44,112
	£	319,143	317,623	320,602	377,313	413,095
Tortoise-shell ..	lbs.	2,922	1,938	2,812	3,308	2,432
	£	1,864	1,243	2,012	2,574	2,025
Trochus-shell ..	cwt.	11,900	14,320	13,186	12,072	16,552
	£	37,602	26,285	25,095	23,142	47,892

The bulk of the pearl-shell exported during 1924–25 was consigned to the United States of America and the United Kingdom, the respective values of the shipments amounting to £252,887 and £147,787, while trochus-shell to the value of £44,086 was dispatched to Japan.

§ 4. The Commonwealth Department of Fisheries.

In 1907 the Commonwealth Government decided to demonstrate what might be attained commercially by the application of modern methods in fishery. A Federal Investigation Ship, the *Endeavour*, was constructed specially for the work, and a Director of Fisheries was appointed. Experimental cruises were undertaken, which showed that Australia possesses an asset of considerable value in her sea fisheries. The *Endeavour* was unfortunately lost at sea with all on board at the end of 1914 and has not been replaced. A description of the trawling grounds discovered, data regarding oceanography to the east of Australia, and a list of the publications of the Department are given in pp. 333 to 335 of Year Book No. 14.

§ 5. Trawling in Australian Waters.

The State Trawling Industry was established in New South Wales in 1915, and fishing operations were conducted with seven steel steam trawlers. The catches were landed at Sydney and Newcastle, and the fish distributed through retail shops, of which there were fourteen in the metropolitan area, one in Newcastle, and five in country towns. During the year ended 30th June, 1922, the State trawlers landed 2,413 tons of fish, valued at £101,337. Early in the year 1923 the Government discontinued trawling operations, as the venture was not a commercial success, and the assets have since been disposed of. The operations of the Government trawlers, however, revealed some of the richest trawling areas in the world, and these grounds are being successfully exploited by private enterprise.

CHAPTER XXI.

MINERAL INDUSTRY.

§ 1. The Mineral Wealth of Australia.

1. **Place of Mining in Australian Development.**—The value of production from the mineral industry is now considerably less than that returned by the agricultural or the pastoral industry, nevertheless it was the discovery of gold in payable quantities that first attracted population to Australia, and thus laid the foundation of its nationhood. Prior to 1851, the year when Hargraves' memorable discovery was made, coal and copper had both been mined to some extent, and the existence of deposits of other minerals, including gold, had been proved. But it was the news of the sensational finds of the precious metal in 1851 and the year immediately following that brought about a constant stream of immigration, and caused an increase in population from 405,000 at the end of 1850 to upwards of 1,146,000 at the end of 1860.

2. **Extent of Mineral Wealth.**—The extent of the total mineral wealth of Australia cannot yet be regarded as completely ascertained, as large areas of country still await systematic prospecting. The presence of considerable deposits of valuable minerals has long been known. Thus, coal was discovered in 1797, and a shipload was exported to Bengal in 1799, silver was discovered as early as 1839, and was worked as early as 1864; copper mining dates back to 1844; lead to about 1848; iron to about 1850; while the discovery of gold in payable quantities dates back to 1851. Cobalt, nickel, manganese, chromium, tungsten, molybdenum, mercury, antimony, bismuth, zinc, cadmium, radio-active ores, etc., have all been found, some in fairly large quantities. During recent years osmiridium has figured largely in the Tasmanian returns.

Among the more valuable non-metalliferous sustances may be mentioned coke, kerosene shale, graphite, alunite, asbestos, diatomaceous earth, phosphate, clays, ochres, etc.; in building stones—sandstones, syenites, granites, basalts, augite-andesite, porphyries, serpentines, slates, limestones, and marbles; in precious stones—diamonds, emeralds, rubies, sapphires, amethysts, precious opal, turquoise, topazes, garnets, chrysolites, cairngorm, agates, etc.

3. **Quantity and Value of Production during 1924.**—The quantities (where available) and the values of the principal minerals produced in each State, and in Australia as a whole during the year 1924, are given in the tables immediately following. It must be clearly understood that the figures quoted in these tables refer to the quantities and values of the various minerals in the form in which they were reported to the States Mines Departments, and represent amounts which the Mines Departments consider may fairly be taken as accruing to the mineral industry as such. They are not to be regarded as representative of Australia's potentiality as a producer of *metals*, this matter being dealt with separately in § 18 hereinafter. It may be explained, therefore, that the item pig-iron in New South Wales refers only to metal produced from locally-raised ore and so reported to the Mines Department. New South Wales is, of course, in normal times, a large producer of iron and steel from ironstone mined in South Australia. As the table shows, the latter State receives credit for this ironstone in its mineral returns, but the iron and steel produced therefrom cannot be assigned to the mineral industry of New South Wales. Similarly lead, silver-lead, and zinc are credited in the form reported to the State of origin—chiefly New South Wales—although the actual metal extraction is carried out to a large extent elsewhere.

MINERAL PRODUCTION.—QUANTITIES, 1924.

Minerals.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
Alunite	ton	1,008	..	..	..	..	..	..	1,008
Antimony ..	,,	..	276	..	..	..	..	..	276
Arsenic	,,	4,416	..	564	68	Not stated	..	..	5,048
Asbestos ..	,,	..	..	..	4	74	..	..	78
Barytes	,,	150	..	..	1,898	..	..	..	2,048
Bismuth	cwt.	300	..	5	..	..	..	..	305
Brown coal ..	ton	..	127,490	..	..	..	..	..	127,490
Chromite.. ..	,,	773	..	..	..	..	..	..	773
Coal	,,	11,618,216	518,315	1,123,117	..	421,864	75,988	..	13,757,500
Cobalt	,,	..	..	197	..	..	..	..	197
Copper (ingot, matte, etc.)	,,	1,129	..	5,630	405	..	6,698	..	13,862
Copper ore ..	,,	..	..	..	..	2,795	..	32	2,827
Diatomaceous earth	,,	564	..	..	..	..	..	..	564
Gold	fine oz.	18,685	67,167	98,841	880	485,035	4,626	703	675,937
Gypsum	ton	2,666	13,268	..	65,690	4,237	..	..	85,861
Iron (pig) (*b*) ..	,,	74,075	..	..	..	..	..	..	74,075
Iron oxide ..	,,	4,863	..	..	..	..	..	..	4,863
Ironstone ..	,,	..	..	..	580,308	..	..	..	580,308
Kaolin	,,	3,087	1,741	..	..	..	..	..	4,828
Lead	,,	..	..	3,695	..	..	4,559	..	8,254
Lead and silver ore, concentrates, etc.	,,	240,957	..	..	6	4,854	..	..	245,817
Limestone flux ..	,,	114,756	..	96,899	109,298	..	146,140	..	467,093
Magnesia.. ..	,,	12,496	76	149	129	..	..	..	12,850
Manganese ore ..	,,	4,387	..	..	316	20	..	..	4,723
Molybdenite ..	cwt.	210	840	55	..	..	..	..	1,105
Osmiridium ..	oz.	..	..	..	..	..	365	..	365
Phosphate ..	ton	107	532	..	84	..	..	..	723
Pigments ..	,,	738	76	..	710	..	20	..	1,544
Platinum ..	oz.	646	..	..	..	..	..	..	646
Pyritic ore ..	ton	..	..	..	..	..	..	..	..
Salt	,,	..	(*a*)	..	62,687	..	..	..	62,687
Sapphires ..	oz.	2,713	..	15,014	..	..	..	..	17,727
Shale (oil) ..	ton	642	..	..	..	..	1,576	..	2,218
Silver	fine oz.	93,484	4,216	276,651	1,017	89,146	642,158	..	1,106,672
Tin and tin ore ..	ton	1,041	38	1,196	..	87	1,108	97	3,567
Wolfram ..	,,	9	..	1	..	..	54	..	64
Zinc ores and concentrates ..	,,	353,650	..	128	..	..	2,749	..	356,527

(*a*) Not available for publication. (*b*) See letterpress preceding this table.

The values of the minerals raised in each State during 1924 are given in the following table :—

MINERAL PRODUCTION.—VALUE, 1924.

Minerals.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
	£	£	£	£	£	£	£	£
Alunite	4,032	..	..	..	..	..	..	4,032
Antimony ..	..	14,522	..	..	..	..	..	14,522
Arsenic	18,859	..	22,500	544	777	..	..	42,680
Asbestos ..	..	..	..	80	2,206	..	..	2,286
Barytes ..	300	..	..	5,694	..	..	..	5,994
Bismuth ..	3,135	..	110	..	..	..	..	3,245
Brown coal ..	..	41,116	..	..	..	..	..	41,116
Chromite ..	2,082	..	..	..	..	..	..	2,082
Coal	9,589,547	569,555	985,542	..	363,255	66,555	..	11,574,454
Cobalt	..	..	39,461	..	..	..	..	39,461
Copper (ingot and matte) ..	71,658	..	380,025	26,046	..	457,386	..	935,115
Copper ore ..	..	..	..	..	40,676	..	239	40,915
Diamonds ..	498	..	..	..	..	..	..	498
Diatomaceous earth	1,092	..	..	..	..	..	..	1,092
Gold	86,905	312,398	459,716	4,093	2,255,932	21,516	3,270	3,143,830
Gypsum ..	1,236	11,818	..	57,479	5,278	..	..	75,811
Iron (pig) (*b*) ..	518,525	..	..	..	..	..	..	518,525
Iron oxide ..	5,361	..	..	..	..	..	..	5,361
Ironstone ..	..	..	..	667,354	..	..	..	667,354
Kaolin	2,910	2,683	..	..	..	..	..	5,593
Lead	..	..	125,263	..	..	154,881	..	280,144
Lead and silver-lead ore, concentrates, etc. ..	4,297,748	..	..	219	83,095	..	..	4,381,062

MINERAL PRODUCTION—VALUE, 1924—*continued.*

Minerals.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. T.	Australia.
	£	£	£	£	£	£	£	£
Limestone flux ..	43,034	..	39,222	38,254	..	146,140	..	266,650
Magnesite ..	12,772	228	149	323	..	..	..	13,472
Manganese ore ..	13,281	..	..	1,128	160	..	..	14,569
Molybdenite ..	2,475	4,850	441	..	..	..	..	7,766
Opal	10,500	..	300	4,000	..	..	..	14,800
Osmiridium ..	..	..	..	..	..	10,617	..	10,617
Phosphate ..	209	532	..	117	..	..	..	858
Pigments ..	942	514	..	4,260	..	50	..	5,766
Platinum ..	12,422	..	..	..	..	..	..	12,422
Pyritic ore ..	..	..	..	..	..	..	..	..
Salt	..	(*a*)	..	141,046	..	..	..	141,046
Sapphires ..	5,659	..	24,340	..	..	..	..	29.999
Shale (oil) ..	962	..	..	..	..	1,526	..	2,488
Silver	12,612	645	42,206	154	13,409	97,837	..	166,863
Tin and tin ore ..	259,485	6,056	175,509	..	12,008	275,014	12,855	740,927
Wolfram ..	170	..	21	..	..	2,785	..	2,976
Zinc concentrates	1.296,571	..	4,283	..	..	90,485	..	1,391,339
Unenumerated ..	(*d*) 24,853	..	6,581	2,801	..	1,175	(*c*)2,774	38,184
Total ..	16,299,835	964,917	2,305,669	953,592	2,776,796	1,325,967	19,138	24,645,914

(*a*) Not available for publication. (*b*) See letterpress, page 719. (*c*) Includes mica, £2,719.
(*d*) Includes dolomite, £12,600 ; silica, £8,000.

It may be pointed out in connexion with the figures given in the above table that the totals are exclusive of returns relating to certain commodities, such as stone for building and industrial uses, sand, gravel, brick and pottery clays, lime, cement, and slates, which might rightly be included under the generic term " mineral." Valuations of the production of some of these may be obtained from the reports of the various Mines Departments, but in regard to others it is impossible to obtain adequate information. In certain instances, moreover, the published information is of little value. By restricting the comparison to items in connexion with which properly comparable information can be obtained for each State, it is believed that a satisfactory estimate of the progress of the mineral industry can be more readily obtained. The items excluded from the total for New South Wales in 1924 consist of—lime, £92,582 ; marble, £1,410 ; slate, £535 ; Portland cement, £1,200,000 ; coke, £932,926 ; chert. £1,000 ; granite, £1,538 ; granite gravels, £5,013 ; shell grit, £430 ; mineral water, £360 ; sulphur (obtained from roasting concentrates), £65,067 ; and brick and pottery clays, £20,260. From the Queensland returns, marble, £657 has been deducted, while carbide, £65,660, and cement £105,130 have been excluded from the Tasmanian figures.

4. **Value of Production, 1920 to 1924.**—The value of the mineral production in each State during the five years 1920 to 1924 is given in the table hereunder :—

MINERAL PRODUCTION.—VALUE, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. T.	Australia.
	£	£	£	£	£	£	£	£
1920 ..	9,791,979	1,435,135	3,617,870	1,150,849	4,110,376	1,426,442	80,101	21,612,752
1921 ..	12,052,509	1,218,783	1,495,899	904,659	3,463,764	822,767	19,003	19,977,384
1922 ..	12,951,164	1,244,966	1,859,084	331,866	3,041,112	878,009	9,959	20,316,160
1923 ..	14,176,688	1,031,223	2,215,498	890,378	2,747,101	1,154,397	16,612	22,231,897
1924 ..	16,299,835	964,917	2,305,669	953,592	2,776,796	1,325,967	19,138	24,645,914

For New South Wales the value of production in 1924 was the highest ever recorded. and was over two millions in excess of that for 1923, which showed the highest value previously. The principal increases in 1924 were in silver-lead and coal, the respective values of which were £1,356,000 and £982,000 above those recorded in 1923. The decrease in the Victorian returns for 1924 resulted chiefly from the decline in the yields from gold and tin.

In Queensland the falling-off in 1921 was occasioned by the low prices realized for the principal industrial metals. None of the copper companies in the Cloncurry district resumed operations, and Mount Morgan, which in previous years contributed about 30 per cent. of the State's mineral yield closed down early in the year. Increases in the returns from copper, lead, silver, cobalt, and tin mainly accounted for the rise in value of production for 1923. The returns for 1924 showed an advance over those for 1923, the chief increases being in gold, tin, and coal. The low returns in South Australia for 1921 were due to the small production of copper, and this was followed by a still smaller yield in 1922, when the value dwindled to £74,000, the least return since 1844. A further factor in the reduction of the total for 1922 was the temporary cessation of operations at the ironstone deposits at Iron Knob, the value of the ore raised being £58,000, as compared with £587,000 in 1921. The improvement in the returns for 1923 was mainly accounted for by increases in the production from ironstone and copper, which amounted to £387,000 in the case of ironstone and £158,000 in the case of copper, over the figures for 1922. The returns for 1924 show an advance of £63,000 over those for 1923, and, while the yield from copper decreased by more than £206,000 this was compensated for by the heavier yield from ironstone, and from salt and gypsum. In Western Australia, while there was a small increase in 1924 as compared with 1923, the value of the total production was over one and a third millions less than in 1920. The collapse in the market for industrial metals, in conjunction with the increased cost of production, brought about the fall in production during 1921 in Tasmania. Improvement in the returns for tin, copper, lead, and limestone were mainly responsible for the increases during the last three years, the total for 1924 including also zinc to the value of £90,485. The stagnation in the base metal industry is reflected in the Northern Territory returns for 1922. It is stated that, unlike the Chinese miners, few Europeans in the Territory engage in mining for any length of time, the majority drifting away elsewhere.

5. Total Production to end of 1924.—In the next table will be found the estimated value of the total mineral production in each State up to the end of 1924. The figures given in the table are also exclusive of the same items referred to in connexion with the preceding table. Thus the total for New South Wales falls short by £21,233,000 of that published by the State Department of Mines, the principal items excluded being coke, £9,132,000 ; cement, £9,294,000 ; lime, £1,021,000 ; and marble, £48,000.

MINERAL PRODUCTION.—VALUE TO END OF 1924.

Minerals.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor.Ter.(*a*)	Australia.
	£	£	£	£	£	£	£	Million. £
Gold ..	63,539,761	302,667,456	85.390,112	1,621.473	154,785.378	8,875,743	2,279,730	619
Silver and lead ..	99,181,439	263,728	3,741,188	378,731	2,015,120	7,676,994	62,515	113
Copper ..	15,487,611	216,656	25,439,450	33,041,322	1,786,798	17,332,852	232,777	94
Iron ..	5,633,438	15,641	471,934	4,058,891	36,721	52,110	..	10
Tin ..	13,100,720	932,042	10,291,102	..	1,522,074	15,843,372	552,822	42
Wolfram	271,876	11,885	1,061,440	301	1,441	182,252	216,859	2
Zinc ..	17,593,137	..	4.283	15,993	5,437	126,805	..	18
Coal ..	141,651,393	7,671,441	13,204,231	..	4,195,133	1,274,087	..	168
Other ..	7,335,874	782,927	2,650,472	2,882,538	130,136	930,053	35,316	15
Total	363,795,249	312,561,776	142,254,212	41,999,249	164,478,238	52,294,268	3,380,019	1,081

(*a*) To 30th June, 1924.

The "other" minerals in New South Wales include alunite, £204,351 ; antimony, £344,588 ; bismuth, £229,554 ; chrome, £117,086 ; diamonds, £144,212 ; limestone flux, £1,040,954 ; molybdenite, £210,111 ; opal, £1,539,894 ; scheelite, £192,375 ; and oil shale, £2,690,710. In the Victorian returns antimony ore was responsible for £606,655. The value for coal in this State includes £297,288 for brown coal. Included in "other" in the Queensland production were opal, £181,495 ; gems, £569,675 ; bismuth, £118,218 ; molybdenite, £598,525 ; and limestone flux, £740,280. The chief items in South Australian "other" minerals were salt, £1,749,813 ; limestone flux, £330,545 ; gypsum, £341,030 ; and phosphate, £127,976. In the Tasmanian returns limestone flux was responsible for £268,568, osmiridium for £308,897, scheelite for £112,468, and iron pyrites for £93,916.

6. **Decline in the Metalliferous Industry.**—On the 1st December, 1921, a Select Committee was appointed by the Legislative Assembly of New South Wales to inquire into and report upon the serious decline in the metalliferous industry. The result of the Committee's investigations was published in a Report issued in 1922, wherein the chief contributing causes of the decline in New South Wales and in Australia generally were summarized as follows :—(1) High cost of production. (2) Deterioration in ore values in existing mines. (3) Inadequate machinery. (4) High freights. (5) High treatment charges. (6) Imperfect labour conditions in mines. (7) Lack of new payable discoveries. (8) Lack of efficiently-supported prospecting.

§ 2. Gold.

1. **Discovery in Various States.**—The discovery of gold in payable quantities was an epoch-making event in Australian history, for, as one writer aptly phrases it, this event " precipitated Australia into nationhood." A more or less detailed account of the finding of gold in the various States appears under this section in Official Year Books Nos. 1 to 4, but considerations of space preclude its repetition in the present issue.

2. **Production at Various Periods.**—In the following table will be found the value of the gold raised in the several States and in Australia as a whole during each of the six decennial periods from 1851 to 1920, and in single years from 1921 to 1924, from the dates when payable discoveries were first reported. Owing to defective information in the earlier years the figures fall considerably short of the actual totals, for during the first stages of mining development, large quantities of gold were taken out of Australia by successful diggers, who preferred to keep the amount of their wealth secret. For South Australia the records in the earlier years are somewhat irregular, and this remark applies to some extent also to the returns for Western Australia and Tasmania.

GOLD.—VALUE OF PRODUCTION, 1851 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Australia.
	£	£	£	£	£	£	£	£
1851–60 ..	11,530,583	93,337,052	14,565	..	..	788,564	..	105,670,764
1861–70 ..	13,676,103	65,106,264	2,076,494	..	..	12,174	..	80,871,035
1871–80 ..	8,576,654	40,625,188	10,733,048	579,068	..	700,048	79,022	61,293,028
1881–90 ..	4,306,541	28,413,792	13,843,081	246,668	178,473	1,514,921	713,345	49,216,821
1891–1900	10,332,120	29,904,152	23,989,359	219,931	22,308,524	2,338,336	906,988	89,999,410
1901–10 ..	9,569,492	30,136,686	23,412,395	310,080	75,540,415	2,566,170	473,871	142,009,109
1911–20 ..	4,988,377	13,354,217	9,876,677	238,808	46,808,351	873,302	100,652	76,240,384
1921 ..	271,302	554,087	214,060	13,933	2,935,693	28,311	1,299	4,018,685
1922 ..	118,359	501,515	378,154	4,693	2,525,811	16,101	540	3,545,173
1923 ..	83,325	422,105	392,563	4,199	2,232,179	16,300	743	3,151,414
1924 ..	86,905	312,398	459,716	4,093	2,255,932	21,516	3,270	3,143,830
Total ..	63,539,761	302,667,456	85,390,112	1,621,473	154,785,378	8,875,743	2,279,730	619,159,653

The value of the gold yield in 1924 was the lowest recorded since the discovery of the precious metal in 1851.

The amount of gold raised in Australia in any one year attained its maximum in 1903, in which year Western Australia also reached its highest point. For the other States the years in which the greatest yields were obtained were as follows :—New South Wales, 1852 ; Victoria, 1856 ; Queensland, 1900 ; South Australia, 1904; and Tasmania, 1899.

The following table shows the quantity in fine ounces of gold raised in each State and in Australia during each of the last five years, the value of one ounce fine being taken at £5 12s. 6d. in 1920, at £5 6s. 0½d. in 1921, at £4 13s. 10¼d. in 1922, at £4 8s. 5¾d. in 1923, and at £4 13s. 0¼d. in 1924.

GOLD.—QUANTITY PRODUCED, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Australia.
	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.
1920 ..	48,908	152,792	115,229	1,697	617,843	6,246	(*a*) 939	943,654
1921 ..	51,173	104,512	40,376	2,628	553,731	5,340	(*a*) 245	758,005
1922 ..	25,222	106,872	80,584	1,000	538,246	3,431	(*a*) 115	755,470
1923 ..	18,833	95,403	88,726	949	504,511	3,684	(*a*) 168	712,274
1924 ..	18,685	67,167	98,841	880	485,035	4,626	(*a*) 703	675,937

(*a*) Year ended 30th June.

Unfortunately the general decline which has characterized Australia's gold output for a number of years has not been checked by new finds of importance, and unless more economic methods of exploiting existing low-grade deposits can be evolved the depression is likely to continue.

3. Changes in Relative Positions of States as Gold Producers.——A glance at the figures in the table showing the value of gold raised will sufficiently explain the enormous increase in the population of Victoria during the period 1851 to 1861, when an average of over 40,000 persons reached the State each year. With the exception of the year 1889, when its output was surpassed by that of Queensland, Victoria maintained its position as the chief gold-producer for a period of forty-seven years, or up to 1898, when its production was outstripped by that of Western Australia, the latter State from this year onward contributing practically half, and so far as recent years are concerned more than half the entire yield of Australia. New South Wales occupied the second place on the list until 1874, when Queensland returns exceeded those of the parent State, and, with the exception of the year 1921, maintained this pre-eminence to the end of 1924. South Australia has occupied the position of lowest contributor to the total gold yield since the year 1871. Taking the average of the last ten years, the relative position of each State in regard to the gold production of Australia was as follows :—

GOLD.—RELATIVE POSITION OF STATES AS PRODUCERS, 1915 TO 1924.

State.	Annual Average of Gold Production, 1915 to 1924.	Percentage on Total.	State.	Annual Average of Gold Production, 1915 to 1924.	Percentage on Total.
	Ozs.			Ozs.	
Total	1,125,524	100·0	New South Wales	63,852	5·7
Western Australia ..	755,177	67·1	Tasmania ..	9,037	0·8
Victoria	160,858	14·3	South Australia ..	3,755	0·3
Queensland ..	132,254	11·8	Northern Territory	591	..

4. Methods of Gold Mining adopted in Each State.—(i) *New South Wales.* In New South Wales the earlier "rushes" were to surface alluvial or shallow-sinking grounds. Many of these were apparently soon worked out, but there is reason to believe that in some instances payable results would be obtained by treating the rejected wash-dirt on more scientific principles. With the exhaustion of the surface deposits, discoveries were made by sinking to what are called deep alluvial leads, representing the beds of old drainage channels in Pliocene and Pleistocene times. The first of these deep alluvial leads was discovered at Forbes, in New South Wales, in 1862. The Tertiary deep leads at Gulgong were discovered in 1871. Cretaceous leads occur at Tibooburra, and detrital gold has been found in Permo-carboniferous conglomerates at Tallawang. The method of dredging is extensively used for winning gold from the beds of running streams, and from loose river flats and other wet ground where sinking would be impracticable. The system was introduced from New Zealand, where it was originally applied with great success on the Clutha River, and practically all the auriferous rivers of New South Wales have been worked by dredges. Hydraulic sluicing is employed also in several places, the necessary machinery being fitted to a pontoon for convenience in moving from place to place. The quantity of alluvial gold obtained, other than by dredging, amounted to 1,276 ozs. in 1924, the chief yields being obtained in the Tumut and Adelong District, 284 ozs. ; Bathurst, 235 ozs. ; Peel and Uralla, 232 ozs. ; and Tambaroora and Turon Division, 144 ozs. The quantity obtained by dredging was 9,334 ozs. ; the largest returns being obtained at Gundagai (Lachlan), 3,620 ozs. ; Adelong (Tumut and Adelong District), 5,458 ozs. ; and Araluen (Southern), 256 ozs. During 1924, the combined value of the dredging plants in the various areas was £63,412, but 4 dredges only were in operation. The quantity of gold won from quartz amounted to 6,833 ozs. In order of importance the yields in mining districts were—Lachlan, 2,707 ozs. ; Southern, 1,418 ozs. ; Bathurst, 1,021 ozs. ; Tambaroora and Turon, 714 ozs. ; Clarence and Richmond 175 ozs. ; and Tumut and Adelong, 149 ozs. From the Cobar District, which for many years was the principal producer, the yield in 1924 was only 143 ozs., as compared with over 3,000 ozs. in 1922.

(ii) *Victoria.* Reef mining predominates in Victoria, although gold is also obtained from alluvial workings, both surface and deep leads. Owing to the exhaustion of much of the payable auriferous area the yield has been on the down grade for many years, and the return for 1924 was the lowest experienced since 1851. A considerable amount of attention is given to dredging and hydraulic sluicing, particularly in the Beechworth, Maryborough, Castlemaine, Ararat, Stawell, Gippsland, and Ballarat districts. The yields from alluvial and quartz respectively as returned (in crude ounces) from the chief mining districts of the State during 1924 were as follows :—Ararat and Stawell, 2,839 and 32 ; Ballarat, 1,216 and 904 ; Beechworth, 4,762 and 20,716 ; Bendigo, 440 and 28,097 ; Castlemaine, 1,544 and 12,007 ; Gippsland, 654 and 724 ; Maryborough, 75 and 40. The yield from the cyanide plants amounted to 2,052 ozs.

The largest output from quartz mining in the Bendigo district was furnished by the New Red, White, and Blue, with 8,769 ozs., valued at £35,079 ; followed by the Hercules and Energetic, 8,686 ozs., £36,455 ; Carlisle, 3,401 ozs., £13,959 ; Central Red, White, and Blue, 1,003 ozs., £3,915 ; Bendigo Amalgamated, 892 ozs., £4,958 ; and Lansell's North Red, White, and Blue, 664 ozs., £2,656. In the Beechworth district the Morning Star Co., at Wood's Point, returned 12,265 ozs., valued at £42,408 ; the Rose, Thistle, and Shamrock at Harrietville, 3,960 ozs., £16,394 ; and the Biplane, at Harrietville, 1,391 ozs., £6,128. In the Daylesford area of the Castlemaine district the Ajax returned 3,981 ozs., £18,154 ; and Ajax North, 4,719 ozs., £18,880. From the once famous Ballarat area the yield in 1924 was less than £1,600.

From alluvial the principal yield was obtained by Cock's Pioneer Gold and Tin Mines, with 3,495 ozs., valued at £13,967. This Company, which operates in the Beechworth district, also produced about £6,000 worth of tin during the year. The New Langi Logan at Ararat returned 2,616 ozs., valued at £10,460.

(iii) *Queensland.* Operations in Queensland are chiefly confined to reefing, and to the production of gold in connexion with the smelting of copper and other ores, the yield from alluvial in 1924 being only 854 ozs., of which 564 ozs. were obtained at Batavia River, while the quantity produced from stone treated was 15,928 ozs. ; from copper and other ores 78,406 ozs. ; and from old tailings 3,653 ozs. ; making a total production of 98,841 ozs. The yields from the principal fields were—Mount Morgan, 76,522 ozs. ; Charters Towers, 1,350 ozs. ; Gympie, 5,392 ozs. ; Chillagoe, 1,949 ozs. ; Etheridge, 1,669 ozs. ; Ravenswood, 4,355 ozs. ; and Mount Coolon, 5,916 ozs. Over three-fourths of the entire production came from Mount Morgan, the yields from Gympie and Charters Towers being much below those of the preceding year. The once famous Charters Towers field is apparently approaching exhaustion.

(iv) *South Australia.* Gold is found in widely-scattered localities in South Australia, but the production has at no period been large. During the last four years the yield has declined from 2,628 ozs. in 1921 to 880 ozs. in 1924. Alluvial gold is produced by the Echunga, Teetulpa, Barossa, and Ulooloo fields. Within recent years the chief source of the metal has been the copper ore of Wallaroo and Moonta, from which it is recovered by smelting and electrolytic refining.

(v) *Western Australia.* The auriferous deposits of Western Australia may be grouped under three headings—(1) superficial deposits, (2) deposits in beds of conglomerate, and (3) lode and vein deposits. The first class includes a number of deposits of alluvial type, either in the beds of existing watercourses or in deep leads up to 100 feet or more below present surface level. Associated with these are deposits of crystalline gold in "pug," oxide of iron, and soft weathered portions of underlying bed rock. Considerable areas of auriferous surface soil are also found, and these have apparently originated from the denudation by weathering of the bed rock and its associated veins. The shallow surface deposits have been worked by ground sluicing wherever water was available, but much of the ground was worked by "dry-blowing." The pug and clayey bedrock are usually treated in puddling machines. In regard to (2) it may be noted that in several localities on the Pilbara goldfield and in one on the Yalgoo, gold has been found in conglomerate of the Nullagine series of rocks, now tentatively accepted as of Cambrian age. The gold is crystalline and is confined to the interstitial cementing material. Occasional occurrences of gold are met with in laterite conglomerate of tertiary and post-tertiary age, and at Kintore in conglomerate of the same age. Lode and vein deposits alluded to in (3) are found in great variety in Western Australia. The gold is always found associated with iron pyrites in the unoxidized portions of the lodes, and often also with copper pyrites, arsenical pyrites and galena. Tellurides of gold occur at times.

The yields from the principal fields in order of importance were as follows :—East Coolgardie, 336,099 ozs.; Mt. Margaret, 43,705 ozs.; Murchison, 24,425 ozs.; Coolgardie, 10,243 ozs.; North Coolgardie, 9,509 ozs.; Yilgarn, 8,451 ozs.; Yalgoo, 5,611 ozs.; East Murchison, 4,897 ozs.; North-East Coolgardie, 4,690 ozs.; Dundas, 3,429 ozs.; Broad Arrow, 2,661 ozs.; Pilbara, 2,134 ozs.; and Peak Hill, 2,113 ozs. Of the total yield of 458,208 ozs. reported to the Mines Department, 454,318 ozs. were obtained from ore treated, 2,723 ozs. from dollied and specimens, while the return from alluvial was about 1,167 ozs. The total referred to differs somewhat from that quoted in the first table in this chapter, which represents gold exported and minted. It may be noted here that the total amount of dividends paid by Western Australian mining companies to the end of the year 1924 was £28,505,000.

Western Australia reached its zenith as a gold-producer in 1903, when the output was valued at £8,771,000, but since then there has been a more or less steady decline until in 1924 the total had dropped to £2,256,000. Three causes may be adduced to account for this falling-off—(1) Exhaustion of known rich deposits. (2) Unwise development, *i.e.*, "picking the eyes" of good mines. (3) Increase cost of stores, equipment, and labour, rendering it unprofitable to treat low-grade ores.

(vi) *Tasmania.* The yield in Tasmania is chiefly obtained from reefing, and the returns from the principal districts in 1924 were as follows:—North-West and West Coasts, 2,226 ozs.; Mathinna, 1,571 ozs.; Lisle Golconda, 163 ozs.; Mt. Claude, 121 ozs.; Beaconsfield, 82 ozs.; Mt. Cameron, Mt. Victoria, and Warrentinna, 452 ozs.; Lefroy, 10 ozs. The total production was equal to 4,626 ozs. fine. During 1924 the blister copper produced by the Mt. Lyell Mining and Railway Co. Ltd. contained approximately 2,134 ozs. of gold.

(vii) *Northern Territory.* The production for 1924 amounted to only 703 ozs. fine. It is stated that the potentialities of the older fields have by no means been exhausted, although a revival of the industry depends on the expenditure of large sums of money, either by the Government or by mining speculators, on developmental work. The bulk of the production came from Fletcher's Gully, while small yields were recorded from the Golden Dyke mine, from Arltunga, and from Pine Creek and other old mining fields.

5. **Remarkable Masses of Gold.**—Allusion has already been made in preceding Year Books to the discovery of "nuggets" and other remarkable masses of gold, but it is not proposed to repeat this information in the present issue. (See Year Book No. 4, page 500.)

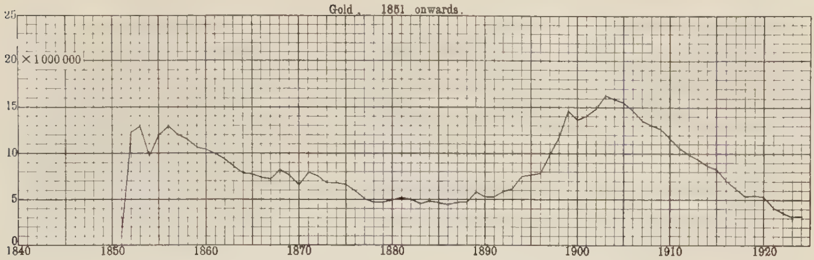
6. **Modes of Occurrence of Gold in Australia.**—This subject has been alluded to at some length in earlier issues of the Year Book, but considerations of space will not permit of repetition in the present issue.

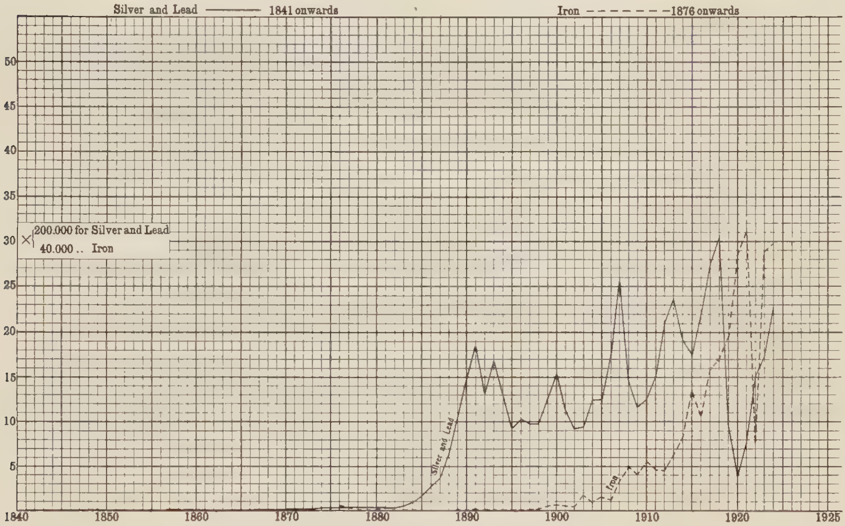
7. **Place of Australia in the World's Gold Production.**—In the table given below will be found the estimated value of the world's gold production, and the share of Australia therein during the five years 1920 to 1924. The figures given in the table have been compiled chiefly from returns obtained directly by the Commonwealth Bureau of Census and Statistics from the gold-producing countries of the world.

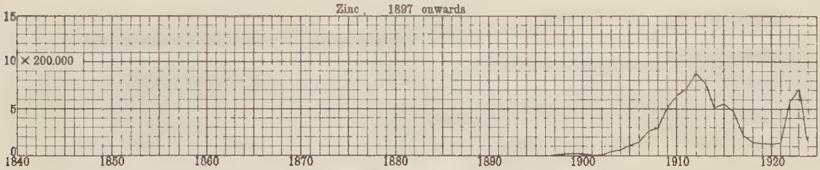
GOLD.—WORLD'S PRODUCTION, 1920 TO 1924.

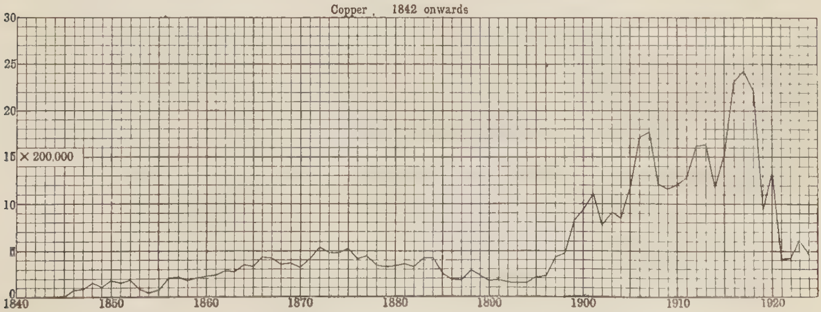
Year.	World's Production of Gold.	Gold Produced in Australia.	Percentage of Australia on Total.
	£	£	%
1920	90,730,000	5,308,000	5.9
1921	83,772,000	4,019,000	4.8
1922	71,653,000	3,545,000	4.9
1923	78,367,000	3,151,000	4.0
1924	87,640,000	3,144,000	3.6

VALUES OF THE PRINCIPAL MINERALS PRODUCED—AUSTRALIA, 1840 TO 1924.


Gold, 1851 onwards.


Silver and Lead ——— 1841 onwards
Iron - - - - - - - 1876 onwards

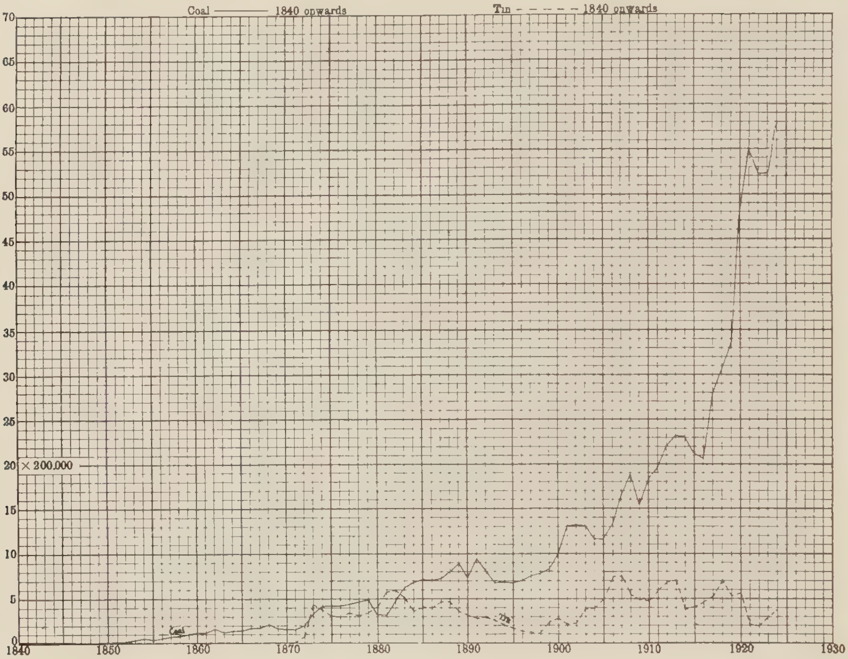

Zinc, 1897 onwards

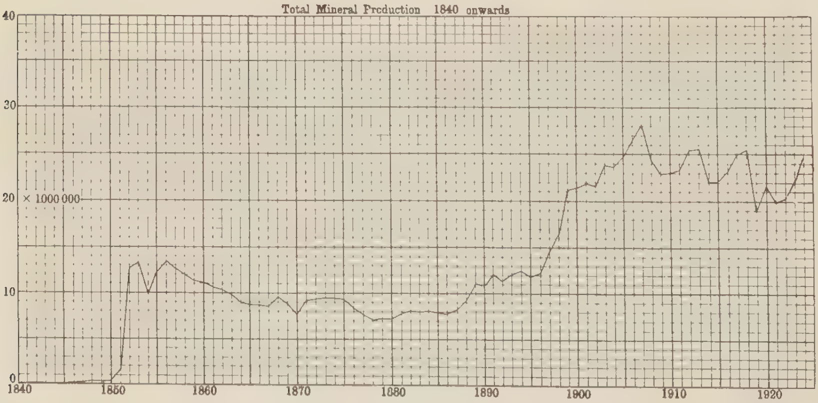

Copper, 1842 onwards

EXPLANANTION.—The values shown are those of the total Australian production of certain of the most important minerals in successive years from 1840 to 1924.

The base of each small square represents an interval of one year, and the vertical height represents in the case of gold £1,000,000; in the case of silver and lead, zinc and copper £200,000; and in the case of iron, £40,000.

VALUES OF PRINCIPAL MINERALS PRODUCED—AUSTRALIA, 1840 TO 1924 *continued.*





EXPLANATION.—The values shown are those of the total Australian production of certain of the most important minerals in successive years from 1840 to 1924.

The base of each small square represents an interval of one year, and the vertical height represents in the case of coal and tin £200,000, and in the case of total mineral production £1,000,000.

The value of the gold yield in the ten chief producing countries during each of the five years 1920 to 1924 is given in the table hereunder. Particulars of the quantity and value of the gold production for all countries for the ten years 1915–24 will be found in the Bulletin of Australian Production issued by this Bureau.

GOLD.—PRODUCTION, CHIEF COUNTRIES, 1920 TO 1924.

Country.	1920.	1921.	1922.	1923.	1924.
	£	£	£	£	£
Union of South Africa	45,892,000	43,096,000	32,895,000	40,480,000	44,534,000
United States ..	13,581,000	12,519,000	10,743,000	10,736,000	11,378,000
Canada	4,303,000	4,911,000	5,929,000	5,457,000	7,095,000
Australia	5,306,000	4,018,000	3,545,000	3,151,000	3,144,000
Mexico	4,154,000	3,626,000	3,512,000	3,437,000	3,686,000
Rhodesia	3,108,000	3,104,000	3,063,000	2,865,000	2,920,000
India	2,609,000	2,073,000	1,832,000	1,697,000	1,843,000
Colombia	1,578,000	1,539,000	1,201,000	1,220,000	1,237,000
Japan	1,499,000	1,408,000	1,239,000	1,154,000	1,252,000
Gold Coast ..	1,167,000	1,078,000	998,000	883,000	958,000

It has been deemed advisable to apportion values in accordance with Australian currency, *i.e.*, at £5 12s. 6d. for 1920, £5 6s. 0⅔d. for 1921, £4 13s. 10¼d. for 1922, £4 8s. 5¾d. for 1923, and £4 13s. 0¼d. for 1924.

The next table shows the average yearly value in order of importance of the yield in the chief gold-producing countries for the decennium 1915–1924.

GOLD.—AVERAGE ANNUAL PRODUCTION, CHIEF COUNTRIES, 1915 TO 1924.

Country.	Value.	Country.	Value.
	£		£
Union of South Africa ..	40,164,000	Russia	2,767,000
United States	14,361,000	India	2,131,000
Australia	5,156,000	Japan	1,288,000
Canada	4,557,000	Gold Coast	1,283,000
Rhodesia	3,215,000	Colombia	1,246,000
Mexico	3,157,000		

The comparison has been restricted to countries where the average for the period is in excess of a million sterling.

8. **Employment in Gold Mining.**—The number of persons engaged in gold mining in each State in 1901 and during each of the last five years is shown in the following table :—

GOLD MINING.—PERSONS EMPLOYED, 1901, AND 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Total.
	No.	No.	No.	No.	No.	No.	No.	No.
1901 ..	12,064	27,387	9,438	1,000	19,771	1,112	200	70,972
1920 ..	1,712	3,742	611	100	7,087	48	20	13,320
1921 ..	1,516	3,050	722	100	6,019	67	10	11,484
1922 ..	1,197	3,310	767	40	5,787	106	12	11,219
1923 ..	1,141	2,982	603	32	5,555	119	30	10,462
1924 ..	1,014	2,651	452	30	5,296	128	18	9,589

The heavy decline noticeable since 1901 is of course due to the exhaustion of accessible payable deposits and the failure to locate any considerable fresh sources of supply.

9. **The Precious Metals Prospecting Act of 1926.**—Under the provisions of this Act a sum of £40,000 was allocated by the Commonwealth Government to assist persons or companies engaged in prospecting for precious metals.

§ 3. Platinum and Platinoid Metals.

1. Platinum.—(i) *New South Wales.* The deposits at present worked in the State are situated at Platina in the Fifield division, near Parkes, and the production in 1924 amounted to 646 ozs., valued at £12,422, as compared with 586 ozs., valued at £10,204 in the preceding year, while the total production recorded to the end of 1924 amounted to 17,250 ozs., valued at £91,655. Production was stimulated by the local price for the metal, £18 10s. per oz., in December, and if a permanent water supply were assured the industry could afford a livelihood for a much larger number than the 80 men engaged in it during 1924.

(ii) *Victoria.* In Gippsland the metal has been found in association with copper, and 127 ozs. were produced in 1913, but there was no production in recent years.

(iii) *Queensland.* Platinum associated with osmiridium has been found in the beach sands between Southport and Currumbin, in creeks on the Russell goldfield near Innisfail, and in alluvial deposits on the Gympie gold-field, but no production has been recorded.

2. Osmium, Iridium, etc.—(i) *New South Wales.* Small quantities of osmium, iridium, and rhodium are found in various localities. Platinum, associated with iridium and osmium, has been found in the washings from the Aberfoil River, about 15 miles from Oban; on the beach sands of the northern coast; in the gem sand at Bingara, Mudgee, Bathurst, and other places. In some cases, as for example in the beach sands of Ballina, the osmiridium and other platinoid metals amount to as much as 40 per cent. of the platinum, or about 28 per cent. of the whole metallic content.

(ii) *Victoria.* In Victoria, iridosmine has been found near Foster, and at Waratah Range, South Gippsland.

(iii) *Tasmania.* For many years osmiridium has been known to exist in the bed of the Savage River, on the West Coast, and in rivulets and creeks in the serpentine country. The first recorded production was in 1910, when 120 ozs., valued at £530, or £4 8s. 4d. per oz., were raised. In 1914 the yield had increased to 1,019 ozs., valued at £10,076, or nearly £9 18s. per oz. From 1915 to 1917 the amount raised fell off considerably, owing to difficulty in disposing of the metal, but in 1918 there was an increase to 1,607 ozs., valued at £44,833; while in 1920 the 2,009 ozs. produced returned £77,114, or over £38 7s. 8d. per oz. In October of that year as much as £42 per oz. was obtained. For 1921 the production was 1,751 ozs., valued at £42,935, or about £24 10s. per oz. The price obtained in 1921, varied from £35 in January to £27 10s. in April, May, and June, to £23 in July and August, and to £20 from September to the close of the year. For 1922 the output reached 1,174 ozs., valued at £35,512. In 1923 the yield amounted to 673 ozs., valued at £19,642, and in 1924 to 365 ozs., valued at £10,617.

§ 4. Silver and Lead.

1. Occurrence in Each State.—Particulars regarding the occurrence of silver in each State will be found in preceding Year Books, Nos. 1 to 5, but considerations of space preclude the repetition of this matter in the present volume.

2. Development of Silver Mining.—The value of the production of silver, silver-lead and ore, and lead from each State during the five years ending 1924 is given hereunder :—

SILVER AND LEAD.—PRODUCTION, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Australia.
	£	£	£	£	£	£	£	£
1920 ..	123,481	1,714	135,559	2,646	190,484	309,035	(*a*) 299	763,218
1921 ..	1,327,364	862	54,188	240	67,521	89,817	..	1,539,992
1922 ..	2,574,108	1,080	109,350	377	87,692	241,694	..	3,014,301
1923 ..	2,956,862	963	216,645	60	60,061	218,881	..	3,453,472
1924 ..	4,310,360	645	167,469	373	96,504	252,718	..	4,828,069

(*a*) Year ended 30th June.

The low production in 1920 was due to the suspension of operations owing to industrial troubles at the principal mines on the Broken Hill field. In addition to causing a cessation of mining operations and treatment of tailings on the Broken Hill field, the smelting works at Cockle Creek, upon which most of the silver-lead mines in other parts of the State depend for the sale of their ores, were forced to close. The resumption of normal production in 1921 by the mines on the Broken Hill field was largely hindered by the low price of lead, and the destruction by fire of the smelting works at Port Pirie. Production in 1924 was greatly stimulated by the favourable price of the metals and with the exception of the Central mine, where work was restricted to fire-fighting, the chief mines on the Broken Hill lode were in full operation.

It must be understood that the totals for New South Wales in the above table represent the *net* value of the product (excluding zinc) of the silver-lead mines of the State. In explanation of the values thus given, it may be noted that the metallic contents of the larger portion of the output from the silver-lead mines in the State are extracted outside New South Wales, and the Mines Department considers, therefore, that the State should not take full credit for the finished product. The real importance of the State as a producer of silver, lead, and zinc is thus to some extent lost sight of. The next table, however, which indicates the quantity of these metals locally produced, and the average contents by assay of concentrates exported during the last five years, will show, as regards New South Wales, the estimated total production and the value accruing to Australia from the three metals :—

SILVER-LEAD MINES.—NEW SOUTH WALES, TOTAL PRODUCTION, 1920 TO 1924.

Year.	Metal Produced within Australia.				Contents of Concentrates Exported.			
	Silver.	Lead.	Zinc.	Value.	Silver.	Lead.	Zinc.	Value.
	ozs. fine.	tons.	tons.	£	ozs. fine.	tons.	tons.	£
1920 ..	196,111	1,749	(a) 10,565	515,728	479,221	3,025	21,742	274,061
1921 ..	3,624,413	47,426	(a) 1,425	1,723,864	617,477	6,539	19,272	261,238
1922 ..	6,648,825	97,867	23,724	4,113,427	3,264,102	19,328	132,186	1,272,074
1923	7,233,236	124,570	41,153	5,707,739	4,834,718	40,906	149,319	1,813,287
1924 ..	6,292,978	120,380	43,579	6,472,812	2,963,693	21,513	114,374	1,292,220

(*a*) Including Zinc Oxide and Zinc Lead Oxide.

The figures given above are quoted on the authority of the Mines Department of New South Wales.

3. Sources of Production.—Broken Hill, in New South Wales, is the chief centre of silver production in Australia.

(i) *New South Wales.* (*a*) *Broken Hill.* A description of the silver-bearing area in this district is given in earlier issues of the Year Book. During 1913 the output of ore from the mines in this division amounted to 1,744,000 tons, the highest recorded in the history of the field, but, owing to the dislocation caused by the war the quantity raised in 1914 decreased to 1,442,000 tons. For the four years 1915 to 1918 the ore raised averaged over 1,200,000 tons, but, owing to the cessation of operations through industrial troubles and the fall in the price of metals the production in 1919 dwindled to 415,400 tons, and in 1920, when operations were carried on for a few weeks only, to 38,661 tons. In 1921 the output rose to 317,333 tons, in 1922 to 640,064 tons, in 1923 to 878,537 tons, and in 1924 to 1,050,674 tons, of which 1,037,243 tons were sulphide and 13,431 tons oxidized ore.

Although the returns are not complete in all cases, the following table relating to the companies controlling the principal mines at Broken Hill will give some idea of the richness of the field :—

SILVER.—BROKEN HILL RETURNS TO END OF 1924.

Mine.	Value of Output to end of 1924.	Dividends and Bonuses Paid to end of 1924.
	£	£
Broken Hill Proprietary Co. Ltd.	50,635,944	12,456,550
Broken Hill Proprietary Block 14 Co. Ltd.	4,092,081	632,160
British Australian Broken Hill Co. Ltd.	5,858,998	821,280
Broken Hill Proprietary Block 10 Co. Ltd. ..	4,946,989	1,432,500
Sulphide Corporation Ltd. (Central Mine)	22,809,310	2,979,375
Broken Hill South Ltd.	14,491,597	3,295,000
North Broken Hill Ltd.	9,515,429	2,743.940
Broken Hill Junction Lead Mining Co. ..	1,185,058	87,500
Junction North Broken Hill Mine	2,858,790	160,814
The Zinc Corporation Ltd.	4,174,320	1,682,455
Barrier South Ltd.	151,517	50,000
Totals	120,810,033	26,341,574

The returns relating to dividends and bonuses paid are exclusive of £1,744,000 representing the nominal value of shares in Block 14, British, and Block 10 companies, allotted to shareholders of Broken Hill Proprietary Company. If the output of the companies engaged in treating the tailings, etc., be taken into consideration, the totals for output and dividends shown in the table would be increased to about 128 millions and 29 millions respectively. The authorized capital of the various companies amounted to £7,823,000.

(*b*) *Picton Division.* The mines in the Yerranderie area produced 5,417 tons of ore in 1924, yielding 464,510 ozs. of silver, besides 784 ozs. of gold, and 1,213 tons of lead, the total production being valued at £108,022. Of the yield from this area in 1924, 3,354 tons valued at £84,000 were raised by the Silver Peaks Mines. Parts of one of the stopes in this mine showed over 10 feet of solid galena, yielding 120 ozs. of silver, and 33 per cent. of lead per ton. Ore to the value of £12,816 also was raised by the Wollondilly Silver Mining Co., and to the value of £8,734 by the Colon Peaks Mining Co. in this area.

(*c*) *Yass Division.* During 1924 the Kangiara mine produced 72 tons of ore yielding 869 ozs. of silver, 21 tons of lead, and 8 ozs. of gold.

(*d*) *Hillgrove Division.* In this division 41 tons of ore were raised in 1924, yielding 18,800 ozs. of silver, valued at £2,380.

(*e*) *Other Areas.* Small quantities of silver, lead, gold, and copper were produced during the year in the Cobar, Condobolin, Mount Hope, Orange, Tumbarumba, and Wilson's Downfall Divisions.

(ii) *Victoria.* The silver produced in 1924 amounted to 4,216 ozs., valued at £645, and was obtained in the refining of gold at the Melbourne Mint.

(iii) *Queensland.* The yields from the chief silver and lead producing centres in 1924 were as follows:—Chillagoe, silver £10,323, lead £60,785; Herberton, silver £9,370, lead £15,162; Brisbane, silver £13,651, lead £25,366; Mt. Morgan, silver £2,577; Etheridge, silver £2,435, lead £11,896; Cloncurry, silver £2,115, lead £7,307. Some of the mining leases in the Chillagoe area are owned by the State. The Mount Isa silver-lead field in the Cloncurry district was discovered in 1923, and the lodes so far opened are distributed over a length of 5 miles by a width of one mile along the west bank of the West Leichhardt River. Large accumulations of high grade carbonate of lead are in sight on this field, which, according to experts, is the largest find in importance since the discovery of Broken Hill.

(iv) *South Australia.* Rich specimens of silver ore have been discovered at Miltalie and Poonana, in the Franklin Harbour district, also at Mount Malvern and Olivaster, near Rapid Bay, and in the vicinity of Blinman and Farina. The surrounding district is also highly mineralized, but, so far, has not been thoroughly prospected. Attention has recently been devoted to the silver-lead ores at Eukaby, near Baratta. In 1923 a discovery of silver-lead ore was made between Ooloo Dam and Mount Distance, north of the Flinders Range, but operations of any magnitude thereat are at present unlikely. The production of silver in 1924 was valued at £154, and of silver-lead ore at £219.

(v) *Western Australia.* The quantity of silver obtained as a by-product and exported in 1924 was 89,146 ozs., valued at £13,409. In addition, 4,854 tons of lead and silver-lead ore and concentrates valued at £83,095 were exported. The production of lead ore from the Northampton mineral field amounted in 1924 to 36,750 tons.

(vi) *Tasmania.* The silver produced in 1924 amounted to 642,158 ozs., valued at £97,837, and the lead to 4,559 tons, valued at £154,881. Of the silver, Magnet Mines returned 151,084 ozs.; North Mt. Farrell, 194,702 ozs.; Zeehan Mines, 41,464 ozs.; Dundas Mines, 77,215 ozs.; Mt. Lyell, 147,376 ozs.; and Round Hill, 24,169 ozs. The principal producers of lead were North Mt. Farrell, 1,933 tons; Zeehan Mines, 446 tons; Dundas Mines, 807 tons; Round Hill, 368 tons; and Magnet Mines, 901 tons.

(vii) *Northern Territory.* Silver-lead ores are found near Pine Creek, and at Mount Shoebridge near Brock's Creek railway station. There are a number of fair-sized galena lodes in the Pine Creek and McArthur River districts, but, owing to costs of transport and realization little attention is devoted to them. No production of silver-lead ores was recorded in 1924.

4. **World's Production.**—The world's production of silver during the last five years for which particulars are available is estimated to have been as follows :—

SILVER.—WORLD'S PRODUCTION, 1920–1924.

Total.	1920.	1921.	1922.	1923.	1924.
World's production in 1,000 fine ozs.	174,612	171,284	213,541	243,265	235,118

The share of Australia in the world's silver production in 1919 was estimated at 7,800,000 ozs., or about $4\frac{1}{2}$ per cent. on the total production, but in 1921, owing to the cessation of operations at the Broken Hill field, the total local extraction fell to 4,573,000 ozs., and the estimated silver contents of the ores, bullion, and concentrates exported to 732,000 ozs., the total being a little over 3 per cent. on the world's production. For 1923 the local extraction was set down as 7,646,000 ozs., and the contents of concentrates etc., exported 5,110,000 ozs., the total representing about 5 per cent. on the world's production, while for 1924 local extraction was set down as 7,631,000, and exports as 2,242,000 ozs., the total being equivalent to about 4 per cent. on production for the world. The figures for the world's production are given on the authority of *The Mineral Industry.*

Arranged in order of importance the estimated yields in 1924 from the chief silver producing countries were as follows :—

SILVER.—PRODUCTION, CHIEF COUNTRIES, 1924.

Country.	Production.	Country.	Production.
	Fine ozs. ('000 omitted.)		Fine ozs. ('000 omitted.)
Mexico	91,000	Japan	3,300
United States	64,792	Central America	2,500
South America	25,000	East Indies	1,500
Canada	19,736	Transvaal	1,500
Australia	9,873	China	200
Europe	9,000	Rhodesia	160
British India	5,500	Congo	30

5. **Prices.**—As the production of silver is dependent to a very large extent on the price realized, a statement of the average price per standard ounce in the London market during the last five years is given below :—

SILVER.—PRICES, 1920 TO 1924.

Price.	1920.	1921.	1922.	1923.	1924.
Pence per standard oz. ..	61.59	36.89	34.41	31.93	33.97

In January, 1920, the price rose to 79.8d., and in February the record figure of 85d. per oz. was reached. Next month, however, there was a drop to a little over 74d., and from August, when the price was 59.87d., the quotations fell rapidly, the figure in December being 41.85d. The average for January, 1921, was about 40d., but by the end of June the price had fallen to less than 35d., followed by a rise to $41\frac{7}{16}$d. in October, and again declining to $35\frac{5}{8}$d. at the end of the year. In March, 1922, the price fell to $33\frac{1}{4}$d., and in September the average stood at $35\frac{5}{16}$d., but thenceforward there was a rapid decline, the price for the closing month of the year being $31\frac{3}{8}$d. There were no violent fluctuations in 1923, the lowest figure being 30.88d. in February, and the highest 33.38d. in December. The average for the year, 31.93d. was the lowest since 1916, when the figure was 31.32d. Although the range of prices in 1924 was slightly more than that in 1923, there were no violent fluctuations, the strength of the Indian demand and the inquiry for continental coinage exercising a steadying influence on the market.

6. **Employment in Silver Mining.**—The number of persons employed in silver mining during each of the last five years is given below :—

SILVER MINING.—PERSONS EMPLOYED, 1920 TO 1924.

Year.	N.S.W. (*a*)	Q'land.	W. Aust.	Tasmania.	Nor. Ter.	Australia
	No.	No.	No.	No.	No.	No.
1920	1,931	143	(*b*) 238	517	2	2,831
1921	3,150	229	(*b*) 41	352	..	3,772
1922	4,712	321	(*b*) 152	495	..	(*c*) 5,686
1923	5,155	133	(*b*) 96	510	..	5,894
1924	5,468	759	(*b*) 141	479	15	(*d*) 6,874

(*a*) Silver, lead, and zinc. (*b*) Lead ore. (*c*) Including 6 in South Australia. (*d*) Including 12 in South Australia.

The bulk of the employment up to 1924, when Queensland assumed importance, was in New South Wales and Tasmania, the quantity of silver raised in the other States being unimportant. The closing of the mines on the Broken Hill field during the greater part of the year was responsible for the small total for 1920, while the resumption of normal activity in 1921 was delayed by the causes alluded to in sub-para. 2 hereinbefore.

§ 5. Copper.

1. **Production.**—The production of copper in the various States has been influenced considerably by the ruling prices, which have undergone extraordinary fluctuations. The quantity and value of the local production as reported and credited to the mineral industry for the years 1920 to 1924 are shown in the following table :—

COPPER.—PRODUCTION, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
		QUANTITY.				
		Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales	Ingot and Matte	1,290	499	575	1,182	1,129
	Ore	..	..	50	79	..
Queensland	Ingot and Matte	15,897	2,428	5,104	6,243	5,630
	Ore	..	..	..	..	..
South Australia	Ingot and Matte	4,339	1,532	1,185	3,523	405
	Ore	..	..	..	..	..
Western Australia	Ingot and Matte	137	206	660	1,057	..
	Ore	1,511	1,040	352	3,394	2,795
Tasmania	Ingot and Matte	4,792	6,181	5,616	6,065	6,698
	Ore	..	..	..	..	..
Northern Territory	Ingot and Matte	..	..	..	..	..
	Ore	(*a*) 67	..	(*a*) 58	..	(*a*) 32
		VALUE.				
		£	£	£	£	£
New South Wales		127,978	41,267	36,233	82,375	71,658
Queensland		1,551,995	168,556	321,535	430,746	380,025
South Australia		423,601	106,370	73,646	232,172	26,046
Western Australia		25,165	24,601	20,379	65,100	40,676
Tasmania		528,237	463,163	391,535	435,413	457,386
Northern Territory ..		(*a*) 780	..	(*a*) 798	(*a*) 30	(*a*) 239
Australia		2,657,756	803,957	844,126	1,245,836	976,030

(*a*) Year ended 30th June.

The heavy fall during 1921 was due to the low price of the metal preventing the profitable working of many of the copper mines throughout Australia, and the continuation of low prices had a depressing effect on production in the following years.

2. Sources of Production.—(i) *New South Wales.* Production in this State in 1924 was valued at £71,658, as compared with £82,375 in the preceding year. As was the case in 1923, a fair proportion of the output was due to the extraction of the small copper content in the Broken Hill silver-lead and zinc ore, about 624 tons of copper, valued at £39,606 being obtained from this source. The depression in this branch of the mining industry during the last few years was again accentuated by the low prices ruling for copper in 1924, coupled with the high cost of production and transport. Practically the only mines in operation were the Mt. Royal group at Tottenham, and the Budgery mine at Hermidale. The former produced 2,300 tons of ore, and 68 tons of precipitates were obtained by leaching old dumps, while 1,921 tons of ore were raised by the latter. Small quantities were produced in the Barraba, Molong, Orange, and Yass divisions. No ore was raised in the Cobar division, which a few years ago was the largest producer of copper in the State, and the expensive machinery at the Great Cobar, Chesney, and Cobar Gold Mines, has been dismantled and removed.

(ii) *Queensland.* The yield in this State amounted in 1924 to 5,630 tons valued at £380,025, and shows a serious decline as compared with 1920 when nearly 16,000 tons valued at £1,552,000 were raised. The falling-off in the yield in recent years was, of course, due to the low prices realized for copper. Returns from the chief producing areas in 1924 were as follows:—Mount Morgan, 4,865 tons, valued at £323,837; Herberton, 83 tons, £5,636; Cloncurry, 261 tons, £17,617; Chillagoe, 355 tons, £23,997; and Gladstone, 46 tons, £3,135. These yields naturally compare very unfavourably with those of 1920. The Cloncurry district—reckoned the richest and most extensive cupriferous area in Australia—which under normal circumstances produces more than half the copper output of the State, returned a yield of 261 tons, as against 7,640 tons in 1920.

(iii) *South Australia.* Taking the entire period over which production extended, the yield of copper in South Australia easily outstrips that of any other State. In recent years, however, Queensland, Tasmania, and New South Wales have come to the front as copper producers, as the table on the preceding page shows. Deposits of copper ore are found over a large portion of South Australia. A short account of the discovery, etc., of some of the principal mining areas, such as Kapunda, Burra Burra, Wallaroo, and Moonta, was given in earlier issues of the Official Year Book. During 1922 the output amounted to 1,185 tons, valued at £73,646, the lowest recorded since 1844. The decline was due to the closing down during the greater part of the year of the Wallaroo and Moonta mines. In 1923 the production amounted to 3,523 tons, valued at £232,172, but there was a decline to 405 tons, valued at £26,046 in 1924. Underground work in connexion with the Wallaroo and Moonta mines has ceased, and operations in 1924 consisted mainly in the treatment of waste and residues, and in dismantling the plant. It is stated that the low price of copper is partly due to heavy production by companies in America, who, working with the latest appliances on immense deposits, can operate at a profit even with existing selling rates.

(iv) *Western Australia.* The value of the copper ore exported from this State in 1924 was £40,676. According to the returns, the production in the West Pilbara field was 79 tons, valued at £1,012; in the Northampton field, 10,672 tons, valued at £34,955; while a small quantity was raised in the Phillips River field. Operations were greatly restricted by the low price ruling for the metal.

(v) *Tasmania.* The quantity of copper produced in Tasmania during 1924 was 6,698 tons, valued at £457,386, the whole of the production being due to the Mount Lyell Mining and Railway Co. Ltd. This Company treated 51,616 tons of ore and concentrates and produced 6,761 tons of blister copper, containing copper, 6,698 tons; silver, 147,376 ozs.; and gold, 2,134 ozs.; the whole being valued at £488,989. The employees in 1924 numbered 1,012, of whom 504 were in the mining branch, 391 were engaged in the reduction works, and 117 in the railway department. Current for power and lighting is obtained from the Lake Margaret hydro-electric plant which also supplies the municipal requirements of Queenstown and Gormanston. To the end of 1924 this Company had paid upwards of £4,152,000 in dividends.

(vi) *Northern Territory.* Copper has been found at various places, but lack of capital and difficulty of transport prevent the development of the deposits. In 1924, the production was returned at 32 tons of ore, valued at £239. What is believed to be a rich deposit was located during the year about 16 miles easterly from Barrow Creek. A small show was worked at the Cullen, and some mining for copper ore was carried out near Kilgour River in the Borroloola District.

3. **Prices.**—The great variation in price that the metal has undergone is shown in the following table, which gives the average price in London and New York during each of the last five years. The figures are given on the authority of the *The Mineral Industry*.

COPPER.—PRICES, 1920 TO 1924.

Year.	Average London Price per Ton Standard Copper.	Average New York Price in Cents per lb. Electrolytic Copper.
	£	Cents.
1920	97.48	17.46
1921	69.36	12.50
1922	62.12	13.38
1923	65.84	14.42
1924	63.15	13.02

As evidence of the tremendous monthly variation in the price of copper it may be noted that in December, 1916, the average London price of standard copper was £145 6s. 4d. per ton, while in April, 1922, it was quoted at £58 16s. In 1924 the price varied between £61 5s. 6d. in January, and £66 2s. 8d. in March.

4. **World's Production of Copper.**—The world's production of copper during the five years 1920 to 1924, is estimated to have been as follows. The figures have been taken from the latest issue of *The Mineral Industry*, and differ slightly from those quoted in the previous issue. :—

COPPER.—WORLD'S PRODUCTION, 1920 TO 1924.

Year	1920.	1921.	1922.	1923.	1924.
World's production—tons ..	937,900	547,700	853,100	1,225,800	1,344,900

The yields from the chief copper-producing countries in 1924 were as follows :

COPPER.—PRODUCTION, CHIEF COUNTRIES, 1924.

Country.	Production.	Country.	Production.
	Tons.		Tons.
United States	729,400	Peru	34,400
Chile	187,300	Germany	19,200
Africa	102,400	Australia	15,000
Japan	61,900	Cuba	11,400
Spain and Portugal ..	54,200	Norway	9,700
Canada	45,500	Serbia	8,000
Mexico	43,900	Bolivia	7,300

The Australian production in 1924 amounted to a little over 1 per cent. of the total.

Over half the world's copper output is produced by the United States, while its smelters supply more than 50 per cent. of the world's requirements.

5. **Employment in Copper Mining.**—The number of persons employed in copper mining during each of the last five years was as follows :—

COPPER MINING.—PERSONS EMPLOYED, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Australia.
	No.	No.	No.	No.	No.	No.	No.	No.
1920 ..	583	2	1,815	1,285	116	1,577	2	5,380
1921 ..	109	..	675	1,000	36	1,361	6	3,187
1922 ..	66	..	882	70	10	948	6	1,982
1923 ..	85	..	1,176	420	80	1,066	3	2,830
1924 ..	52	..	1,017	34	110	532	12	1,757

§ 6. Tin.

1. **Production.**—The development of tin mining is, of course, largely dependent on the price realized for the metal, and, as in the case of copper, the production has been subject to somewhat violent fluctuations. The tables below show the quantity and value of the production as reported to the Mines Departments in each of the States during the five years, 1920 to 1924 :—

TIN.—PRODUCTION, 1920 TO 1924.

State.		1920.	1921.	1922.	1923.	1924.
		QUANTITY.				
		Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales ..	Ingots	887	816	734	896	1,041
	Ore ..	2,486	1,595	410	..	..
Victoria	Ingots	..	..	..	..	..
	Ore ..	84	80	115	78	38
Queensland	Ingots	(a)	(a)	(a)	(a)	(a)
	Ore (a)	1,486	1,050	1,098	903	1,196
Western Australia ..	Ingots	..	..	..	..	..
	Ore ..	243	67	110	131	87
Tasmania	Ingots	1,310	790	679	1,160	1,108
	Ore ..	(b)	..	..	..	..
Northern Territory ..	Ore ..	(c) 180	(c) 83	(c) 79	(c) 136	(c) 97
		VALUE.				
		£	£	£	£	£
New South Wales		413,794	163,451	154,698	180,789	259,485
Victoria		12,815	11,961	12,071	10,371	6,056
Queensland		252,054	98,471	99,758	114,945	175,509
Western Australia		49,449	6,485	10,930	15,095	12,008
Tasmania		369,362	130,257	112,407	236,955	275,014
Northern Territory		(c)27,610	(c) 7,793	(c) 5,891	(c)13,887	(c) 12,855
Total		1,125,084	418,418	395,755	572,042	740,927

(a) Included with ore. (b) Included with ingots. (c) Year ending 30th June.

As the table shows, there was a heavy decline in the production of tin in 1922, the values being the lowest recorded for the quinquennium. The falling off was due to low prices and high production costs, and in some instances to exhaustion of ore supplies. Dredging operations in certain districts were hampered by insufficiency of water.

2. **Sources of Production.**—(i) *New South Wales.* Tin-mining operations were stimulated by the increased price of the metal in 1924, and the yield from the New England district, which is the principal producing area, showed a great advance on that for the previous year. A large proportion of the output in New South Wales is obtained by dredging, the quantity so won in 1924 being 850 tons, valued at £142,472. Forty-one pump-dredges and one bucket dredge were in operation during the year. In the Tingha division of the Peel and Uralla district the yield amounted to 532 tons, valued at £87,741. The Emmaville division in the New England district showed a yield of 442 tons, valued at £73,107. In the Wilson's Downfall division, 48 tons, valued at £7,974, were raised. From the Torrington division, 127 tons, valued at £20,411, were returned. The Ardlethan field, in the Lachlan division, produced 11,400 tons of ore which yielded concentrates to the value of £50,650.

(ii) *Victoria.* The production in 1924 was obtained by dredging, the Cock's Pioneer Gold and Tin Co. in the Beechworth district contributing the whole of the output which amounted to 38 tons.

(iii) *Queensland.* The chief producing districts in Queensland during 1924 were Herberton, 804 tons, valued at £116,554; Kangaroo Hills, 207 tons, £30,292; Stanthorpe, 60 tons, £9,124; Cooktown, 58 tons, £9,278; Chillagoe, 55 tons, £8,578. The higher price of the metal in 1924 as compared with 1923 was responsible for an increase in production, but the total yield in 1924, amounting in value to £176,000, was much below that of 1920, when the yield was valued at £252,000.

(iv) *Western Australia.* The export of tin ore from the State during 1924 amounted to 87 tons, valued at £12,008. The production of black tin from the Greenbushes field amounted to 53 tons, valued at £7,469, and from the Pilbara field 29 tons, valued at £4,048. Deposits of tin occur in widely-separated localities in the Kimberley division, the Thomas River in the Gascoyne Valley, and at Poona and Coodardie on the Murchison gold-field.

(v) *Tasmania.* During 1924 the quantity of metallic tin won amounted to 1,108 tons, valued at £275,014. This return is a considerable advance on the figures for the years 1921 and 1922, but is still far below that recorded in 1919 and 1920. The yield from the North-Eastern division amounted in 1924 to 628 tons. Of the total, 362 tons were contributed by the mines in the Pioneer and Gladstone districts, while 262 tons came from the Ringarooma, Derby, and Branxholm area. The yield in the Eastern division amounted to 192 tons; the Avoca Mines furnishing 83 tons; the St. Helen's Mines 53 tons; and the Weldborough, Lottah, and Blue Tier, 56 tons. From the North-Western division the output was 246 tons, the bulk of it being raised by the Mt. Bischoff, with 222 tons, and Mt. Bischoff Extended, with 17 tons. The production in the Western division was returned at 40 tons.

(vi) *Northern Territory.* The yield of tin ore and concentrates in 1924 amounted to 97 tons, valued at £12,855, of which 30 tons were raised at Mt. Wells, 26 tons at Collah and Muldiva, 18 tons at Marranboy, 10 tons at Umbrawarra and Horseshoe Creek, and small quantities at Hayes Creek, Bynoe Harbour, Snadden's Creek, Hidden Valley, and Cullen. Two batteries for the treatment of tin ore have been erected by the Government, one at Marranboy, costing £20,163, and one at Hayes Creek, at an expense of £3,294.

3. **World's Production.**—According to *The Mineral Industry* the world's production of tin during each of the last five years was as follows. The figures have been slightly amended since last issue.

TIN.—WORLD'S PRODUCTION, 1920 TO 1924.

1920.	1921.	1922.	1923.	1924.
Tons.	Tons.	Tons.	Tons.	Tons.
122,910	109,709	129,329	125,747	133,233

The yields from the chief producing countries in 1924 were as follows:—

TIN.—PRODUCTION, CHIEF COUNTRIES, 1924.

Country.	Production.	Country.	Production.
	Tons.		Tons.
Federated Malay States ..	44,000	Unfederated Malay States	2,000
Bolivia	31,600	Great Britain	2,000
Banka	15,100	Australia	1,900
Billiton	11,500	South Africa	1,150
China	7,400	India	1,100
Siam	7,300	Congo	1,000
Nigeria	6,200		

Based on the results for the last three years, Australia's share of the world's tin production would appear to be about 2.2 per cent.

4. **Prices.**—The average price of the metal in the London market for the years 1920 to 1924 was as follows :—

TIN.—PRICES, 1920 TO 1924.

Year.	Average Price per Ton. £	s.	d.	Year.	Average Price per Ton. £	s.	d.
1920..	296	1	7	1923	202	5	0
1921..	165	5	4	1924	248	14	10
1922..	159	9	0				

The year 1921 was a disastrous one for the tin miner, as the price of the metal dropped by over £130 per ton as compared with that in the preceding year. Moreover, the fall had been more or less continuous since the early months of 1920, thus forcing the poorer mines to close down. In 1922, the London market opened at £168 15s., but fell to £139 in March. Thereafter prices generally increased to £183 15s. at the close of the year. Conditions greatly improved in 1923. The price in January averaged £181 18s. 7d. rising to £219 15s. in March, but there was a drop to £181 5s. 3d. in July. Thereafter the figures rose steadily until December when £235 2s. 3d. was realized, while the average for the year stood at £202 5s. Prices while extremely erratic in 1924, nevertheless showed a marked advance on those for 1923. The highest point reached in 1924 was in March, when £277 8s. 7d. was realized, but the average had fallen by more than £48 per ton in May. From July onwards the figure rose again from £233 6s. 7d. to £261 17s. 7d. in December.

5. **Employment in Tin Mining.**—The number of persons employed in tin mining during the last five years is shown below :—

TIN MINING.—PERSONS EMPLOYED, 1920 TO 1924.

Year.	N.S.W.	Victoria.	Q'land.	W. Aust.	Tas.	Nor. Ter.	Australia.
	No.	No.	No.	No.	No.	No.	No.
1920	1,822	48	920	187	1,318	120	4,415
1921	1,321	31	864	59	699	100	3,074
1922	1,090	13	659	31	620	120	2,533
1923	1,047	7	703	35	842	170	2,804
1924	1,004	2	698	40	781	115	2,640

Most of the tin in Victoria is produced by companies mining primarily for gold.

§ 7. Zinc.

1. **Production.**—(i) *New South Wales.* (*a*) *Values Assigned.* The production of zinciferous concentrates is practically confined to the Broken Hill district of New South Wales, where zincblende forms one of the chief constituents in the enormous deposits of sulphide ores. During the earlier years of mining activity on this field a considerable amount of zinc was left unrecovered in tailings, but from 1909 onwards improved methods of treatment resulted in the profitable extraction of the zinc contents of the accumulations at the various mines.

As the metallic contents of the bulk of the concentrates, etc., raised in the Broken Hill District are extracted outside New South Wales, the mineral industry of that State is not credited by the Mines Department with the value of the finished product. The figures given hereunder, therefore, refer to the quantity and value of the zinc concentrates actually exported during the years specified.

ZINC.—CONCENTRATES, ETC., EXPORTED FROM NEW SOUTH WALES, 1889 TO 1924.

Year.	Quantity of Zinc Concentrates, etc., Exported.	Value.	Year.	Quantity of Zinc Concentrates, etc., Exported.	Value.
	Tons.	£		Tons.	£
1889	97	988	1921	79,694	283,455
1891	219	2,622	1922	363,681	1,157.458
1899	49,879	49,207	1923	426,049	1,411,652
1920	71,043	249,456	1924	353,650	1,296,571

(*b*) *Local and Foreign Extraction.* A statement of the quantity of zinc extracted in Australia and the estimated zinc contents of concentrates exported overseas during the five years 1921 to 1925, will be found in § 18 hereinafter.

(ii) *Queensland.* At the Silver Spur mine at Texas, in the Stanthorpe division of Queensland, part of the ore is high in zinc and lead, but low in silver. Profitable extraction of the zinc and lead depends, however, on cheap transport. It is proposed to convey the high grade zinc ore by motor tractor to the railway at Inglewood. Zinc sulphide is produced by the Mount Garnet Mine in the Herberton district, and during 1916 several hundred tons of good quality ore were raised, but until a suitable treatment plant has been erected, it is stated that production cannot be economically undertaken. The total production of zinc in 1924 was returned at 128 tons, valued at £4,283, of which 78 tons were produced in the Chillagoe area, and 47 tons in the Stanthorpe area.

(iii) *South Australia.* Zinc is known to exist in various localities in South Australia, but there has been no production during recent years.

(iv) *Tasmania.* Investigations in regard to the Read-Roseberry zinc-lead deposits in Tasmania have proved the existence of 1,680,000 tons of ore, which, added to an estimated quantity of 915,000 tons of " probable " ore, make a total supply of 2,595,000 tons. During the year 1924 the production from local ores was taken as 2,748¾ tons, valued at £90,485.

The Electrolytic Zinc Co. at Risdon worked on raw materials obtained partly from the West Coast district of Tasmania, but chiefly from Broken Hill in New South Wales. From other than Tasmanian ores the production in 1924 consisted of 43,925 tons of zinc valued at £1,469,366, and 154 tons of cadmium, valued at £34,449. About 1,400 men were employed at these works. At Zeehan, where 158 men were employed, lead concentrate and zinc calcine were produced from Tasmanian ore.

2. **Prices.**—During the four years 1911 to 1914, the London price of zinc averaged £23 15s. per ton, ranging fom £21 in 1914 to £26 3s. 4d. in 1912. Owing to the heavy demand and other circumstances arising out of the war, the prices in 1915 and 1916 reached the very high average of £67 11s. 1d. and £72 1s. 5d. per ton respectively. For 1920 the average recorded was £44 7s. 5d., for 1921, £25 16s. 11d., for 1922, £30, for 1923, £33 1s. 2d., and for 1924, £33 14s. 7d. per ton.

§ 8. Iron.

1. **General.**—The fact that iron-ore is widely distributed in Australia has long been known, and extensive deposits have been discovered from time to time at various places throughout the States, but the utilization of these deposits for the production of iron and steel is, at present, confined to New South Wales.

2. **Production.**—(i) *New South Wales.* (*a*) *Extent of Deposits.* Iron ores of various composition are found widely distributed throughout the State, but some of the deposits are at present of no commercial importance on account of their small and scattered extent, or by reason of their distance from means of transport. Excluding deposits too far from existing railways, or too small to warrant exploitation, as well as aluminous ores, the quantity of iron ore available by quarrying has been set down as 15 million tons. There is, in addition, a large tonnage available by the more costly method of mining. Altogether it appears probable that the total quantity available for smelting is about 53 million tons. The chief sources of supply during recent years were the deposits at Cadia, Carcoar, and Tallawang.

(*b*) *Lithgow Iron Works.* Reference to the events leading up to the establishment of ironworks at Lithgow will be found in earlier issues of the Year Book (see No. 3, p. 508). During 1924 the following materials were received at the blast furnaces: Iron ore, 139,590 tons; limestone, 58,672 tons; slag, 3,446 tons; and coke, 100,952 tons. The iron ore was raised from quarries at Tallawang (Gulgong division), and Cadia (Orange division), and the pig iron produced therefrom amounted to 74,075 tons.

The following table shows the quantity and value of pig iron produced in New South Wales during the last five years from locally-raised ores only :—

PIG IRON.—PRODUCTION FROM LOCAL ORES, NEW SOUTH WALES, 1920 TO 1924.

Particulars.		1920.	1921.	1922.	1923.	1924.
Quantity ..	Tons	86,096	90,053	54,856	94,350	74,075
Value	£	645,720	639,376	248,909	707,625	518,525

The figures quoted above refer to production from *local* ores only, and as such credited to the New South Wales mineral industry. They do not, of course, represent the total production of pig iron in New South Wales, since, as shown in the succeeding paragraph, a considerable quantity of ore raised in South Australia and credited therefore to the mineral returns of that State is treated in New South Wales.

(*c*) *Newcastle Iron Works.* The Broken Hill Proprietary Company established works for the manufacture of iron and steel on a large scale at Newcastle, and operations were started early in 1915. The Company is utilizing the immense deposit of iron ore at the Iron Knob quarries in South Australia, which are connected with the seaboard at Whyalla, a distance of about 34 miles, by the Company's tramway. The ore quarried for the year ended 30th November, 1925, amounted to 615,266 tons. Extensive limestone works and loading bin at Devonport, Tasmania, as well as quarries in New South Wales for dolomite, magnesite, etc., are also owned by the Company.

The output of pig iron for the year ended 30th November, 1925, amounted to 348,592 tons, and of steel ingots to 341,060 tons. Further details in regard to the activities of these works in 1921 were given on page 347 of Official Year Book No. 15. The steel works possess three blast furnaces of a normal daily producing capacity of 1,300 tons, and a fourth furnace of 100 tons for the production of foundry iron. There are nine 65-ton basic open-hearth furnaces capable of producing 10 to 12,000 tons of ingot steel weekly. The works are supplied with a 35-inch blooming mill for the production of blooms, plates, etc., a 28-inch rolling mill for the manufacture of heavy rails, structural steel, billets, etc., an 18-inch mill for making light rails, structural shapes, fishplates, and heavy sections of merchant bar and billets, a 12-inch mill and an 8-inch mill, each for merchant bars, etc., a continuous rod mill for the production of wire rods, and a fishplate mill. A steel foundry, containing one acid open-hearth furnace, and a cupola furnace for iron castings, with a direct metal foundry which takes the hot metal from the blast furnaces, supply all necessary castings.

The company also possesses 224 by-product coke ovens, and connected with this department are the tar, sulphate of ammonia, and benzol plants.

(*d*) *Iron Oxide, etc.* A quantity of iron oxide is purchased by the various gasworks for use in purifying gas, and it is also to some extent employed as a pigment, the output in New South Wales being drawn chiefly from the deposits in the Port Macquarie, Moss Vale and Goulburn Divisions. During 1924 the iron oxide raised amounted to 4,863 tons, valued at £5,361, the product being partly used for the purposes mentioned.

(ii) *Victoria.* Iron ore has been located at various places in Victoria, particularly at Nowa Nowa in the Gippsland district, and at Dookie. A blast furnace was erected in 1881 near Lal Lal, on the Moorabool River, and some very fair quality iron was produced, which was used for truck wheels and stamper shoes at the Ballarat mines. The fall in the price of the metal, however, led to the closing of the works. In his report for 1905 the Secretary for Mines stated that without special assistance to the industry there does not seem to be any prospect of the deposits being profitably worked.

(iii) *Queensland.* Queensland possesses some extensive deposits of iron ore, which are mined chiefly for fluxing purposes in connexion with the reduction of gold and copper ores. During the year 1921, 4,061 tons of ironstone flux, valued at £5,976, were raised, the bulk of which came from Iron Island in the Rockhampton district. No production was recorded in 1922, and 200 tons only were raised in 1923, while there was no output recorded in 1924. It is stated that Queensland possesses within its own border an abundance of the ore, fuel, and fluxes required for the carrying on of a large ironworks.

(iv) *South Australia.* South Australia possesses some rich deposits of iron ore capable of being mined for an indefinite period. The best known deposit is the Iron Knob, a veritable hill of iron ore of high percentage, situated about 40 miles W.S.W. from Port Augusta. A recent survey places the probable reserves of ore in the Iron Knob and Iron Monarch deposits at 133 million tons, with an average content of 63.64 per cent. iron. The Broken Hill company utilizes ore from this quarry at its ironworks at Newcastle, New South Wales, and the amount raised for the year 1921 was 506,993 tons, valued at £587,267, and for 1922, 51,423 tons, valued at £58,177, the heavy fall in the latter year being due to the temporary closing of the works. Owing to resumption of activity in 1923 the production for that year rose to 384,434 tons, valued at £445,303, and in 1924 the record output of 580,308 tons, valued at £667,354 was reached. It is estimated that the deposits in the Middleback Range contain 32 million tons of slightly higher grade ore than that at the Iron Knob.

(v) *Western Australia.* This State has some very rich deposits of iron ore, but, owing to their geographical position, the most extensive fields at the present time are practically unexploited, the production in the State being confined chiefly to that needed for fluxing purposes. The ores are found over a stretch of country from Kimberley to Cape Leeuwin. Amongst the most important of the high-grade deposits are those at Yampi Sound in the Kimberley division, which are estimated to contain 97 million tons of very rich ore; Wilgie Mia, where the ore in sight is estimated at 27 million tons; Gabanintha, near Nannine, with over a million tons above surface level; Mount Gibson, in the south-west corner of the Yalgoo gold-field, where there are about 10 million tons of ore adapted for steel manufacture by the acid process; Tallering Range in the westernmost angle of the Yalgoo gold-field where the deposits amount to several millions of tons; and Koolyanobbing, near Southern Cross, where there is a very large deposit of high-grade micaceous hematite. There was no record of production during the last two years.

(vi) *Tasmania.* Probably the most extensive deposits of iron ore in Tasmania are those at Rio Tinto, Savage River. The ore is chiefly magnetite, containing over 65 per cent. iron, and is well situated for open cutting to a great depth. Estimates place the quantity of ore available at as high as 50 million tons. There is an immense deposit of red hematite at the Blythe River, near Burnie, the lode being over a mile in length, and up to 100 feet in width. Estimates as to the quantity of ore available vary from 17 to 30 million tons. In fairly close proximity to the Hampshire Railway Station there is a deposit of magnetite estimated to contain 20 million tons, while a deposit at the Tenth Legion mine in the Zeehan district is stated to contain 2 million tons. Deposits of brown oxide and magnetic iron ore containing 1½ million tons are found in the Beaconsfield district. On the Dial Range there is a deposit of red hematite containing high grade ore. North-west of this outcrop is situated the Iron Cliffs lode, about 4 miles from Penguin. These two deposits are estimated to contain 700,000 tons. Extensive deposits of hematite and magnetite are found on the Nelson River, the outcrop being 100 feet wide over a large distance. The total quantity of iron ore available in Tasmania has been roughly estimated at 100 million tons.

The production of iron ore in 1908 was 3,600 tons, valued at £1,600, raised by the Tasmanian iron mine at Penguin, but since the closing down of that mine in 1909 there has been no further production. Iron pyrites for the manufacture of sulphuric acid and of manures is produced on the West Coast, the quantity raised in 1923 being 11,882 tons, valued at £26,737, but there was no production recorded in 1924.

(It may be noted here that the Sulphur Bounty Act of 1923 provides for a bounty of £2 5s. per ton in respect of sulphur produced from Australian pyrites and other sulphide ores and concentrates.)

(vii) *Northern Territory.* Large bodies of rich ironstone have been discovered in various parts of the Territory, particularly between the Adelaide River and Rum Jungle. Owing to the lack of local coal, however, the deposits possess no immediate value.

3. Iron and Steel Bounties.—The local production of iron and steel has been encouraged by various legislative enactments (see Official Year Book No. 15, p. 348). Under "The Iron and Steel Products Bounty Act 1922," bounties are payable on fencing wire, galvanized sheets, wire-netting, and traction engines made in Australia. It is essential that these articles be made from materials produced and manufactured in Australia, unless imported material is authorized after inquiry and report by the Tariff Board. The total payments in any one financial year must not exceed £250,000. Rates of bounty are—for fencing wire and galvanized sheets, £2 12s. per ton; for wire-netting, £3 8s. per ton; and for traction engines from £40 to £90 each, according to brake horse-power. The amounts paid in each case during the year ended 30th June, 1925, were £71,948, £44,545, £90,340, and £500.

4. **World's Production of Iron and Steel.**—The Australian production of iron and steel at present forms a very small proportion of the world's output. According to The Statesman's Year Book, the world's production of each commodity in the years specified for the principal countries was as follows :—

PIG IRON AND STEEL.—WORLD'S PRODUCTION, 1913, AND 1922 TO 1924.

Country.	Pig Iron.				Steel—Ingots and Castings.			
	1913.	1922.	1923.	1924.	1913.	1922.	1923.	1924.
	(Tons—000's omitted.)				(Tons—000's omitted.)			
United States ..	30,653	26,851	40,026	31,000	31,301	35,603	44,944	37,800
Great Britain ..	10,260	4,902	7,440	7,400	7,664	5,881	8,482	8,250
France	5,126	5,147	5,346	7,500	4,614	4,464	5,029	6,850
Belgium ..	2,428	1,578	2,154	2,800	2,428	1,539	2,250	2,850
Luxemburg ..	..	1,650	1,384	2,125	..	1,368	1,182	1,850
Germany ..	19,000	8,000	4,400	8,200	18,631	9,000	5,900	8,500
Czecho-Slovakia ..	..	339	750	700	..	630	1,000	800
Poland	..	458	492	500	..	930	935	950
Japan	56	300	300	350	13	500	500	550
Other Countries ..	9,659	2,713	4,179	4,055	10,368	3,183	4,874	6,975
Total ..	77,182	51,938	66,471	64,630	75,019	63,098	75,096	75,375

The returns for the year 1924 have been partly estimated and are subject to revision when the complete particulars for all countries have been received.

§ 9. Other Metallic Minerals.

1. **Antimony.**—The production of antimony ore in New South Wales amounted in 1921 to 125 tons, valued at £900, the output being obtained in the Hillgrove and Kempsey divisions, but the low prices ruling in the last three years caused a temporary cessation of mining. Deposits of the mineral are also found in the Glen Innes and Drake divisions, and in other areas. The total quantity of antimony (metal and ore) raised in New South Wales up to the end of 1924 was 19,032 tons, valued at £344,588. The production of antimony concentrates in Victoria during 1924 amounted to 276 tons, valued at £14,522. The whole of the production came from ore raised by a company operating at Costerfield. In Queensland extensive deposits are found at Neerdie in the Wide Bay district, at Wolfram Camp, on the Hodgkinson field, on the Palmer River in the Ravenswood district, and at various places in the Herberton district. Ore has also been obtained in the Dividing Range near Herberton and adjacent to some of the central tributaries of Emu Creek. Owing to the low price of the metal in 1919 production was practically negligible; while none was recorded during the period 1920 to 1924. In Western Australia lodes of stibnite carrying gold have been found in the Roeburne district. During 1917, 12 tons of antimony, valued at £258 were exported, but there was no subsequent production until 1920, when 3 tons, valued at £45, were exported. There was no record of production in the years 1921 to 1924.

2. **Arsenic.**—In New South Wales the production of arsenical ore in 1924 amounted to 4,416 tons, valued at £18,859, of which 479 tons were raised by the Valla Gold Mines in the Bellingen division; 1,809 tons at the Ottery Mine in the Emmaville division; 1,290 tons in the Hillgrove division; and 176 tons in the Torrington division. The mineral is also found in the Deepwater, Moruya, Tumut, and Port Macquarie divisions.

During 1917 the high price ruling for arsenic, and the urgency for the need of supplies in connexion with the destruction of prickly pear, led to the reservation by the Queensland Mines Department of an extensive area of arsenic-bearing deposits at Jibbinbar, in the Stanthorpe district. Production in 1924 from the Stanthorpe district amounted to 563 tons, valued at £22,500, of which 379 tons were raised at the State mine. The product is used not only for the destruction of prickly pear, but for the manufacture of arsenical dip solutions and other purposes. In South Australia attention is being devoted to arsenic-bearing minerals at some of the old mines, and prospecting is being carried on at the Preamimma Mine in the Monarto district, and ore is also raised from a mine near Callington. Production in 1924 amounted to 68 tons, valued at £544. During 1920, Western Australia exported 1,765 tons of arsenical ore, valued at £4,260. In 1921, the export fell to 7 tons, valued at £16, but there was an increase to 1,075 tons, valued at £1,784, in 1922. The arsenical ore (contained in gold ore) exported in 1923 was valued at £686, and in 1924 at £777.

3. **Bismuth.**—Ores of this metal are found in association with tungsten and molybdenum, and sometimes tin, in New South Wales, but owing to lack of a market the production of ore and concentrates in 1924 was only 15 tons valued at £3,135, the greater portion of the yield being obtained in the Glen Innes division in conjunction with mining for molybdenite. A deposit chiefly of bismuth oxide has been located in the Mt. Darling Ranges about 15 miles north-east of Broken Hill. The total production to the end of 1924 was 794 tons valued at £229,554. In Queensland wolfram and bismuth have been found in various districts, but, owing to the low prices obtainable the chief centres of production—Mount Carbine, Wolfram, Bamford, etc.—were practically idle in 1924. In South Australia deposits are found at Balhannah, at Mount Macdonald, and at Murninnie on the shores of Spencer's Gulf. A small quantity of bismuth was exported from Western Australia in 1919, but none was recorded subsequently. In Tasmania a small quantity, valued at £21, was raised in 1921 by the S. & M. mine at Middlesex, but there was no production in the last three years.

4. **Cadmium.**—The cadmium contained in the zinc ores mined at Broken Hill is recovered at Risdon, Tasmania, as a by-product in the electrolytic treatment of calcined zinc concentrates. During the three years, 1922 to 1924, amounts of 36 tons, valued at £13,189; 123 tons, valued at £34,776; and 150 tons, valued at £33,478 respectively were so obtained, but, as pointed out previously, credit is not taken for the value of the finished product in the New South Wales returns as the metal is not recovered in the State.

5. **Chromium.**—The output of chromite in New South Wales during 1924 was estimated at 773 tons, valued at £2,082, raised in the Barraba division. Prospecting operations were continued during the year at Attunga in the Tamworth division, but, so far, without discovering payable deposits of the ore. Chrome iron ore is found in Queensland in the Rockhampton district, and about 160 tons were raised in 1920 by the Mount Morgan Company at Glen Geddes, but there was no production during the last four years. Chromite has been discovered at Coobina on the overland route between Peak Hill and Nullagine in Western Australia, but, on account of the difficulties of transport and the low price of the mineral there is no immediate likelihood of production.

6. **Cobalt.**—This metal was found at Carcoar in New South Wales in 1889, and subsequently at Bungonia, Port Macquarie, and various other places. There was no export of cobalt since 1911, and the total produced since 1860 amounted in value to only a little over £10,000. In Queensland a rich deposit was opened up in 1920 at Mount Cobalt in the Cloncurry area, and the production in 1924 amounted to 197 tons, valued at £39,461. Although the product is a valuable one, greater development is hindered by the uncertainty of the demand.

7. **Lead.**—Lead mining *per se* is not practised to any extent in Australia, the supply of the metal being chiefly obtained in conjunction with silver and zinc. In New South Wales the Mines Department took credit in 1922 for 8,113 tons, valued at £194,712, and the production to the end of 1922 was taken as 327,000 tons, valued at £6,442,000. Owing to the closing down of the treatment works at Cockle Creek no production was recorded in 1923 and 1924, the whole of the lead concentrates being forwarded for treatment outside the State. As stated previously, the metallic contents of the major portion of the silver-lead ores are extracted outside New South Wales, and

the figures quoted above refer only to lead values assigned as the produce of the State. In Victoria, oxides, sulphides, and carbonates of lead are found in the reefs on most of the gold-fields. The deposits are not, however, of sufficient extent to repay the cost of working. In Queensland the deposits are worked chiefly for the silver, copper or gold contents of the ore, the lead produced in 1924 amounting to 3,695 tons, valued at £125,263. Of this total the Chillagoe area produced 1,808 tons, valued at £60,785; the Herberton area, 450 tons, valued at £15,162; Etheridge, 353 tons, £11,896; Brisbane, 726 tons, valued at £25,366; and the Cloncurry area 217 tons, valued at £7,307. Lead has been found at many places in South Australia, although, with few exceptions, the lodes are not of great size. The works at Port Pirie in South Australia, controlled by the Associated Company, which includes the chief Broken Hill Mining Companies, constitute the largest and most complete lead smeltery in the British Empire. About 1,400 men are employed, and the fuel used amounts to 150,000 tons yearly. During 1924, lead and silver-lead ore exported from Western Australia amounted to 4,854 tons, valued at £83,095. Tasmanian lead production in 1924 was returned as 4,559 tons, valued at £154,881, of which the Zeehan mines contributed 447 tons, the North Mt. Farrell mines, 1,933 tons, Magnet, 901 tons, and Round Hill mines, 368 tons.

8. **Manganese.**—During 1924 the output of manganese ore in New South Wales amounted to 4,387 tons, valued at £13,281, of which 3,149 tons were raised in the Grenfell division, and 1,118 tons in the Rylstone division. Manganese ores are also found in the Deepwater, Oberon, Parkes, Tamworth, and Trunkey divisions. In Victoria the production in 1922 amounted to 150 tons, valued at £930, raised in the Heathcote division, but none was raised in 1923 and 1924. In Queensland there are extensive deposits of low-grade manganese ores in various places. High grade ore is not available in quantity, but the extensive deposits of medium grade at Kandanga should in future become a valuable asset in the steel industry. Production in 1923 amounted to 74 tons, valued at £332, of which 40 tons were raised in the Stanthorpe division, and 30 tons in the Gympie division, but none was raised in 1924. Extensive deposits of the ore were mined at Boolcunda in South Australia some years ago. Deposits are being actively worked at the present time at Pernatty, Hawker, and Gordon. The production in 1924 was valued at £1,128. The Pernatty ore is of high grade, and being free from deleterious substances is specially suited for use in making high-grade steel. In Western Australia ores of the metal are found widely scattered, the black oxide being especially plentiful in the Kimberley district. Extensive deposits exist in a locality 18 miles north-west from Peak Hill. In the northern part of the Cue district the deposits cannot at present be profitably worked owing to absence of cheap transport facilities. The export of manganese in 1924 consisted of 20 tons, valued at £160.

9. **Molybdenum.**—The production of molybdenite in New South Wales during the year 1924, amounted to 10½ tons, valued at £2,475, chiefly obtained from mines at Kingsgate and Dundee in the Glen Innes division. The total production of molybdenite since its discovery is stated at 821 tons, valued at £210,111. In Victoria 42 tons of concentrates valued at £4,850, were produced in 1924 at Everton. The production in Queensland for 1924 was 2¾ tons, valued at £441, raised on the Chillagoe field. The Wombah mine near Mount Perry is regarded by geologists as one of the most promising sources of molybdenite in Australia. A small quantity was at one time produced from the mines in the Moonta district in South Australia, and the occurrence of the metal is reported from various other localities, but no production was recorded during the last five years. Molybdenite occurs in small quantities at various localities in Western Australia, the production recorded in 1922 being valued at £500, but none was recorded in 1923 and 1924. In the Northern Territory, molybdenite is found at Yenberrie, where it is stated that the ore increases in richness as the workings become deeper.

10. **Radium.**—Deposits of radio-active ores occur in lode form in South Australia, and are believed to be richer and more extensive than any others so far located. There is an extensive deposit at Radium Hill, Olary, about 12 miles from Cutana railway siding, and another at Mount Painter in the Northern Flinders Ranges. Ores from both localities have yielded radium. Pure radium bromide was produced at a treatment plant in Sydney, and up to the end of 1914, when operations were suspended, 466 milligrammes were extracted. The Radium and Rare Earths Treatment Co. has been

formed to exploit the radio-active ores at Olary, and a syndicate has taken up the workings at Mount Painter. A sample of 11 milligrammes of radium bromide was extracted from 2½ tons of crude ore in 1925 by experts attached to the first named company. Extensive plant and buildings have been erected, and it is hoped that production on a large scale will shortly be possible.

11. **Tungsten.**—Wolfram and scheelite, the principal ores of tungsten, are both mined to some extent in New South Wales, but the low prices obtainable caused a cessation of mining activity in this direction in the last three years. A large proportion of the total production from tungsten ores is obtained from the wolfram worked at Torrington, but the production in 1924 amounted to 9 tons only. The deposits at Hillgrove are the principal source of scheelite. In Victoria the production of wolfram was returned in 1920 as 7½ tons, valued at £355, yields being obtained at Mount Murphy and the Tambo River, but there was no subsequent production. In Queensland, tungsten ores are found in several districts, but, owing to low prices production in 1924 was insignificant. (See also "Bismuth.") A deposit of wolfram was discovered near Yankalilla, in South Australia, as far back as 1893, but the production up to date has been small. It is believed that careful examination will lead to increased production from the deposits at Callawonga Creek. There was no production of tungsten minerals in 1924 in Western Australia. Tungsten ores are commonly met with in the gold reefs, and both wolfram and scheelite have been recorded as occurring in several widely-separated localities. In the Northern Territory wolfram is found at Hatches Creek, Wauchope Creek, Wolfram Creek, Hidden Valley, and Yenberrie. Numerous samples of high grade ore have been obtained at the Frew River in Central Australia. The production in 1923 was, however, trifling, and none was recorded in 1924. Wolfram is mined at various points in Tasmania, the production for 1924 being 54 tons, valued at £2,785, obtained at the Avoca mines. Scheelite has been discovered on King Island in Bass Strait, but there was no production in 1924.

12. **Other Metals.**—In addition to the metals enumerated above there is a large number of others occurring in greater or less degree, while fresh discoveries are being constantly reported.

§ 10. Coal.

1. **Production in each State.**—An account of the discovery of coal in each State will be found in preceding issues of the Year Book. (See No. 3, pp. 515–6.) The quantity and value of the production in each State, and in Australia, during the five years 1920 to 1924, are given in the table hereunder :—

COAL.—PRODUCTION, 1920 TO 1924.

Year.	N.S.W.	(*a*) Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
			QUANTITY.				
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1920 ..	10,715,999	442,241	1,109,913	..	462,021	75,429	12,805,603
1921 ..	10,793,387	514,859	954,763	..	468,817	66,476	12,798,302
1922 ..	10,183.133	559,284	958,519	..	438,443	69,238	12,208,617
1923 ..	10,478,513	476,823	1,060,662	..	420,714	80,718	12,517,430
1924 ..	11,618,216	518,315	1,123,117	..	421.864	75,988	13,757,500
			VALUE.				
	£	£	£	£	£	£	£
1920 ..	7,723,355	464,739	841,551	..	350,346	64,005	9,443,996
1921 ..	9,078,388	603,323	831,483	..	407,117	63,446	10,983,757
1922 ..	8,507,946	664,251	840,472	..	381,555	61,016	10,455,240
1923 ..	8,607,892	525,270	925,227	..	368,949	70,797	10,498,135
1924 ..	9,589,547	569,555	985,542	..	363,255	66,555	11,574,454

(*a*) Exclusive of brown coal.

The figures for Victoria quoted above are exclusive of brown coal, the quantity and value of which during the last five years were as follows :—

BROWN COAL.—PRODUCTION, VICTORIA, 1920 TO 1924.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Tons.	£		Tons.	£
1920	162,682	64,180	1923	116,888	38,019
1921	79,224	31,074	1924	127,490	41,116
1922	90,402	31,179			

2. **Distribution and Production of Coal in each State.**—(i) *New South Wales.*—Estimates of the quantity of coal available in any large area of country are of course, more or less hazardous. Some years ago the Government Geologist estimated that within a depth of 4,000 feet from the surface the coal seams in New South Wales of a thickness exceeding 2½ feet were capable of producing over 78 million tons, allowing for a loss in working of one-fifth. In 1890, Professor David gave a total of between 130 million and 150 million tons, excluding seams under 3 feet in thickness. After a careful review of the position in 1901, the late E. F. Pittman suggested 115 million tons as an approximate figure.

In the following estimate by R. H. Cambage, of actual reserves, no account has been taken of coal below 4,000 feet, and the coal has been classified in three grades—Grade A, including coals of first quality, suitable for steam-raising, gas-making and household purposes ; Grade B, including coals with lower calorific value and higher ash content than those in Grade A, but suitable for use as mined ; Grade C, including coals from inferior seams generally with high ash content, but suitable for use after washing or flotation.

The approximate tonnage of commercial coal in the various grades in the coal-fields of New South Wales is given hereunder.

NEW SOUTH WALES.—APPROXIMATE TONNAGE OF EXTRACTABLE COMMERCIAL COAL.

Coal-field.	Tonnage.	Grade.
	Tons.	
I. Upper Coal Measures—Northern Coal-field, including Curlewis ..	2,150,400,000	A
	2,630,400,000	B
	4,300,400,000	C
Muswellbrook Coal-field ..	480,000,000	B
Southern Coal-field, including Douglas Park, Berrima	2,162,760,000	A
	573,120,000	B
	1,930,420,000	C
Western Coal-field, including Talbragar ..	720,000,000	A
	720,000,000	B
	1,920,000,000	C
Coorabin (Riverina) Coal-field	14,400,000	B
II. Middle Coal Measures—East Maitland Coal-field, including Rix's Creek	345,600,000	A
	702,700,000	B
III. Lower Coal Measures—Maitland Coal-fields—Lower or Greta Coal Measures ..	1,324,800,000	A
Muswellbrook Coal-field — Lower or Greta Coal Measures	96,000,000	A
Totals	6,799,560,000	A
	5,120,620,000	B
	8,150,820,000	C
Grand Total	20,071,000,000	All Grades

The total given above includes the amount already won, and, after allowing for this, the actual reserves have been set down at 20,000 million tons, while the possible reserves in addition may be taken as 100,000 million tons. Estimating a loss of one-fifth in winning, the actual commercial reserves may be considered to be about 16,000 million tons. The coal from the various districts differs considerably in quality—that from the Newcastle district being especially suitable for gas-making and household purposes, while the product of the Southern (Illawarra) and Western (Lithgow) is an excellent steaming coal. At the present time the Greta coal seams are being extensively worked between West Maitland and Cessnock, and this stretch of country, covering a distance of 15 miles, is now the most important coal-mining district in Australasia. The Permo-Carboniferous measures have in various places been disturbed by intrusions of volcanic rocks, which in some instances have completely cindered the seams in close proximity to the intrusive masses, while in other instances the coal has been turned into a natural coke, portion of which some years ago realized good prices as fuel.

The table hereunder gives the yields in each of the three districts during the five years 1920 to 1924 :—

COAL.—PRODUCTION IN DISTRICTS, NEW SOUTH WALES, 1920 TO 1924.

District.	1920.	1921.	1922.	1923.	1924.
	Tons.	Tons.	Tons.	Tons.	Tons.
Northern	7,320,510	7,493,002	7,156,921	6,861,759	8,077,689
Southern	1,902,889	2,062,958	1,878,594	2,170,699	1,973,855
Western	1,492,600	1,237,427	1,147,618	1,446,055	1,566,672
Total ..	10,715,999	10,793,387	10,183,133	10,478,513	11,618,216

The output in 1924 was the highest yet recorded. The falling-off in 1922 as compared with previous years was due to the closing down of the steel works at Newcastle, while the decline in production shown by the Northern district in 1923 was brought about mainly by stoppage of work on the Maitland coal-field from April to the beginning of August.

(ii) *Victoria.* (*a*) *Black Coal.* The deposits of black coal in Victoria occur in the Jurassic system, the workable seams, of a thickness ranging from two feet three inches to six feet, being all in the Southern Gippsland district. An estimate, by R. H. Cambage, of the tonnage of extractable black coal is given hereunder :—

VICTORIA.—APPROXIMATE TONNAGE OF EXTRACTABLE BLACK COAL.

Districts.	Tonnage.
	Tons.
Korumburra, Jumbunna, and Outtrim	2,000,000
Wonthaggi	20,000,000
Total (including other small areas)	25,000,000

The output of black coal in Victoria during the last five years was as follows :—

BLACK COAL.—PRODUCTION, VICTORIA, 1920 TO 1924.

Year.	State Coal Mine.	Other Coal Mines.	Total Production.	Value.
	Tons.	Tons.	Tons.	£
1920	376,285	65,956	442,241	464,739
1921	451,255	63,604	514,859	603,323
1922	511,174	48,110	559,284	664,251
1923	418,394	58,429	476,823	523,270
1924	452,032	66,283	518,315	569,555

Amongst the other coal mines the chief producers in 1924 were the Sunbeam Colliery at Korumburra, with 17,850 tons; the Jumbunna Coal Pty. Ltd. at Jumbunna, with 11,124 tons; and the Cardiff Colliery at Korumburra, with 10,863 tons.

(*b*) *Brown Coal.*—(1) *General.* Deposits of brown coal and lignite of immense extent occur in gravels, sands, and clays of the Cainozoic period throughout Gippsland, Mornington Peninsula, Werribee Plains, Gellibrand, and Barwon and Moorabool basins. In the Latrobe Valley, the beds reach a thickness of over 800 feet. When dried, the material makes good fuel, but, owing to its excessive combustibility and friability requires to be consumed in specially constructed grates. Its steaming value is equal to about half that of the Wonthaggi coal. Some large factories already have adopted brown coal for firing boilers, and there is also a fair demand for the product by householders. In 1917 an Advisory Committee appointed to report on the brown coal deposits of Victoria recommended the establishment of an open-cut mine at Morwell in connexion with a comprehensive scheme of electrical power generation and transmission, as well as for the supply of brown coal for other requirements. The recommendations of this Committee were incorporated in the "Electricity Commissioners Act" of 1918. The Commission is actively engaged in the work of opening up the Morwell deposits, and the product is being utilized for the generation of electricity, which is transferred to Melbourne and to other towns in Victoria within economic distance. The first generator at the Yallourn power station was brought into operation on the 15th June, 1924, and the works are now assisting in meeting the increasing demands for electric energy in the metropolitan and country areas. At the 30th June, 1925, the consumers connected to the mains numbered 20,230. A township has been established at Yallourn, with provision for an ultimate population of 3,000. On the 30th June, 1925, there were 2,594 employees engaged on the various works of the Commission as follows:—At Yallourn, 1,380; Transmission Lines, 335; Metropolitan Works, 379; Water Power Investigation, 23; District Undertakings, 92; Brown Coal Mine (old open cut), 385. As ascertained by boring, the estimated tonnage of brown coal available, according to a report by the Government Geologist, is as follows:—

VICTORIA.—APPROXIMATE TONNAGE OF EXTRACTABLE BROWN COAL.

District.	Tonnage.
	Tons.
Morwell and District	5,000,000,000
Traralgon and District	5,000,000,000
Welshpool–Gelliondale	250,000,000
Altona	100,000,000
Lal Lal	25,000,000
Wensleydale	3,000,000
Total	10,378,000,000

The brown coal produced in Victoria is raised chiefly at the State Mine at Morwell, where the output in 1924 amounted to 126,028 tons. During the year 600 tons were also raised by the Otway Coal Co., at Bambra, and 862 tons by the Victorian Central Coal and Iron Co. at Lal Lal.

(2) *Production of Briquettes.* The briquetting plant started operations in November, 1924, and the output of briquettes to the 30th June, 1925, was approximately 36,500 tons. It should be noted, however, that the Yallourn plant is what is known as a "half factory", and economic production will necessitate an extension thereof. The present capacity of the plant is about 100,000 tons a year, and the Commission is desirous of increasing this to 300,000 tons. Briquettes were made by a small plant at Morwell as far back as 1894, but the product failed to compete successfully with black coal. According to the Report of the Geological Survey of the United States the world's production of briquettes in 1923 was 37½ million tons, of which over 23 million tons were produced in Germany.

(iii) *Queensland.* According to B. Dunstan, F.G.S., the coal measures of Queensland cover an estimated area of 73,000 square miles, of which 20,000 square miles are made up of recognized coal-fields, i.e., 2,000 square miles of Trias-Jura age, 2,000 Cretaceous, and

16,000 of Permian age. Estimated coal reserves include all seams not less than 1 foot thick situated at depths not greater than 1,000 feet below the surface. The actual and probable reserves are estimated as follows :—

QUEENSLAND.—ACTUAL AND PROBABLE RESERVES OF EXTRACTABLE COAL.

Class of Coal.	Actual Reserves.	Probable Reserves.
	Tons.	Tons.
Semi-anthracite	122,500,000	629,800,000
Bituminous	279,250,000	828.800.000
Semi-bituminous	2,600,000	157,400,000
Gas Coal	7,770,000	4,000,000
Lignite	..	64,000,000
Total	412,120,000	1,684,000,000

The distribution of production during the last three years was as follows :—

COAL PRODUCTION.—QUEENSLAND, 1922 TO 1924.

Districts.	1922.	1923.	1924.
	Tons.	Tons.	Tons.
Ipswich	579,184	607,983	596,720
Darling Downs	93,524	94,760	93,252
Wide Bay and Maryborough	79,305	74,215	105,181
Rockhampton (Central)	68,075	108,890	123,781
Clermont	104,141	50,553	55,799
Bowen	11,806	91,643	103,987
Mount Mulligan (Chillagoe)	22,484	32,618	44,397
Total	958,519	1,060,662	1,123,117

The output in 1924 was the highest recorded. There were 35 collieries operating in the Ipswich district, 5 in the Darling Downs, 5 in the Maryborough area, 12 in the Central district, 1 at Mount Mulligan in the Chillagoe district, and 2 in the Bowen district. State coal mines are in operation at Collinsville in the Bowen field, at Mount Mulligan in the Chillagoe field, at Baralaba in the Dawson Valley area, and at Hartley and Bowman in the Rockhampton area.

(iv) *South Australia.* Thin seams of black coal similar to the Jurassic coal of Victoria have been proved by a bore at Robe, but the depth at which the seams were located, i.e., between 2,830 feet and 3,950 feet, renders exploitation thereof unlikely. The seams of sub-bituminous coal at Kuntha Hill, 110 miles north of Marree, and at Lake Phillipson, are of good quality, but too far away from existing means of transport. At Leigh Creek there is a very large deposit, only partly explored, of sub-bituminous coal, but it is 170 miles distant from the nearest port. The chief hope for its utilization lies in its employment in pulverized form for railway purposes. At Noarlunga, 25 miles by rail from Adelaide, the proved lignite deposits contain 1,438,000 tons. The deposits at Moorlands, 87 miles by rail from the capital, contain an estimated quantity of 8,175,000 tons. At Clinton, 55 miles by sea from Port Adelaide, boring has proved the existence of 32,384,000 tons. Bores at Inkerman, 58 miles by rail from Adelaide, have revealed an estimated deposit of 10,701,000 tons. The mineral has also been located at Hope Valley, 8 miles by road from Adelaide, but no estimate has been made of tonnage. Altogether, the total reserves of lignitic fuel exceed 50 million tons, and further research will undoubtedly considerably increase this figure. South Australian lignite has a high sulphur content, and the effect of this constituent as regards the method of utilizing the deposits will need special investigation.

(v) *Western Australia.* The coal seams in Western Australia belong to the Carboniferous, Mesozoic, and Post-tertiary ages. Most of the coal contains a large proportion of moisture, and belongs partly to the hydrous bituminous and partly to the lignite class. The only coal-field at present worked is at Collie, in the Permo-Carboniferous beds. The area occupied by the coal measures is approximately 50 square miles, and the beds attain a thickness of over 2,000 feet, the coal seams totalling 137 feet. Two distinct types of coal, designated respectively the Proprietary and Collie Burn, have been recognized. The former is dull and porous, with a thinly-banded structure and much "mother of coal," and is characterized by a tendency to crumble on exposure, by its free burning, and lack of smoke. The Collie-Burn type is bright and compact, less laminated, almost free from mother of coal, clear and firm, and, while burning less freely, gives off an appreciable amount of smoke.

Estimates place the amount of available coal on the field to a depth not exceeding 2,000 feet at 3,500 million tons. About 5½ miles north-east of Wilga, on the Donnybrook-Preston Valley Railway, a deposit of coal occurs which is apparently an extension of the Collie fields. Its area, however, has not yet been determined, but boring is in progress and good seams have been located.

Beds of Permo-Carboniferous coal are found in the Irwin River area, and a seam believed to be a northern prolongation of the Irwin River measures has been located in the valley of the Greenough River. Coal has also been found at Fly Brook, one of the branches of the Donnelly River, on the South Coast, and in the neighbourhood of the Vasse River, which flows into Geographe Bay.

Other discoveries have been made at Millbrook on the Blackwood River, and in the valley of the Fitzroy River in the Kimberley area.

The production from the five collieries situated at Collie amounted in 1924 to 421,864 tons. If the demand for coal warranted it, the output from any of the collieries could be considerably increased.

(vi) *Tasmania.* The commercial value of the Tasmanian coals varies according to their age, the oldest, i.e., the Permo-Carboniferous, being of much greater value than the youngest, i.e., the Tertiary. At present there are not sufficient data available regarding the extent and distribution of the Tertiary deposits, although it is known that they occur in all quarters of the island, and that some of them contain workable seams. Both the Trias-Jura and Permo-Carboniferous coals are valuable for domestic purposes, but the Trias-Jura seams are thicker and more extensive, and hence more largely worked. Permo-Carboniferous coals have been mined for many years for domestic purposes at Mersey, and the Preolenna and Barn Bluff fields contain coals of high potential value. The total quantity of coal available for payable extraction has been estimated at approximately 135 million tons, or on the basis laid down by the International Geological Congress, 125 million tons actual reserve, and 123 millions probable reserve.

Of the total output in 1924, amounting to 75,988 tons, the Cornwall and Mt. Nicholas Collieries in the North-Eastern division raised 40,707 and 29,077 tons respectively. About 3,700 tons were produced from the Cardiff-Jubilee Colliery, 900 tons from York Plains, 700 tons from Illamatha, 500 tons from Preolenna, and smaller quantities from Seymour, Allison, and Fingal.

(vii) *Australia.* A summary of the information available in regard to estimated actual and possible reserves of coal for Australia as a whole is given in the appended table.

AUSTRALIA.—TONNAGES OF ACTUAL AND PROBABLE COAL RESERVES.

State.	Actual Reserves.	Probable Additional Reserves.
	Million tons.	Million tons.
New South Wales	20,000	100,000
Victoria	10,400 (Brown) 25 (Black)	Apparently not large
Queensland	412	13,000
South Australia	50 (Brown)	Fairly large, no estimate
Western Australia	(*a*) 3,500	..
Tasmania	125	123
Northern Territory	(*b*)	(*b*)
Total	34,512	..

(*a*) Combined reserves and probable reserves. (*b*) No estimate.

3. **Production in Various Countries.**—The total known coal production of the world in 1924 amounted to about 1,328 million tons, towards which Australia contributed nearly 14 million tons, or about 1 per cent. The following table shows the production of the British Empire and the chief foreign countries in units of 1,000 tons during each of the five years from 1920 to 1924 where the returns are available. The production of lignite is included in those countries in which it is raised :—

COAL PRODUCTION.—BRITISH EMPIRE, 1920 TO 1924.

Year.	United Kingdom.	British India.	Canada.	Australia.	New Zealand.	Union of S. Africa.
	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.
1920	229,500	18,000	15,100	12,968	1,844	10,200
1921	163,300	19,300	13,400	12,879	1,809	10,200
1922	249,600	19,000	13,500	12,299	1,858	8,700
1923	276,000	19,700	15,200	12,634	1,970	10,600
1924	267,100	20,200	12,200	13,885	2,000	11,200

COAL PRODUCTION.—FOREIGN COUNTRIES, 1920 TO 1924.

Year.	Germany. (*a*)	Belgium.	France. (*b*)	Czecho-Slovakia.	Poland.	Netherlands.	Russia. (*c*)	Japan.	United States.
	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.	1,000 tons.
1920 ..	129,245	22,000	33,200	30,300	30,547	3,900	7,450	28,800	587,700
1921 ..	134,062	21,400	37,200	32,600	29,343	3,900	8,567	25,800	452,100
1922 ..	129,420	20,900	41,700	28,400	34,267	4,800	9,462	27,300	425,800
1923 ..	61,225	22,600	46,100	28,600	35,518	5,600	10,759	28,500	587,000
1924 ..	116,919	23,000	57,100	34,309	31,707	6,100	13,606	30,000	512,000

(*a*) Exclusive of Alsace-Lorraine since 1919, Saar and Palatinate since 1920, and Polish Upper Silesia from June, 1922.

(*b*) Including Saar and Alsace-Lorraine.

(*c*) Union of Soviet Republic.

More than half the production in Germany and Czecho-Slovakia was represented by lignite.

4. **Exports.**—The exports of coal from Australia are chiefly confined to New South Wales.

The total quantity of coal of Australian production (exclusive of bunker coal) exported to other countries in 1924–5 was 978,083 tons, valued at £1,079,584, of which 975,000 tons were exported from New South Wales.

In the following table will be found the quantity and value of the exports from New South Wales, during the last five years. The figures are given on the authority of the Mines Department of that State, and include both bunker coal and coal exported from New South Wales to other States.

COAL.—EXPORTS, NEW SOUTH WALES, 1920 TO 1924.

Year	1920.	1921.	1922.	1923.	1924.
Quantity, 1,000 tons	4,987	5,525	5,239	4,900	5,414
Value, £1,000	4,591	5,794	5,929	5,481	4,469

Arranged in order of importance the principal oversea countries to which coal was exported from New South Wales during the year 1924–25 are shown hereunder. The quantity and value refer strictly to exports, and exclude bunker coal:—

COAL.—DESTINATION OF OVERSEA EXPORTS, NEW SOUTH WALES, 1924–25.

Country.	Quantity.	Value.	Country.	Quantity.	Value.
	Tons.	£		Tons.	£
New Zealand ..	579,087	645,402	India	20,949	21,997
Philippine Islands	93,137	104,046	Hawaiian Islands	18,292	19,499
Netherlands East Indies ..	81,668	88,637	United States ..	15,839	16,749
Malaya	40,316	43,206	Solomon Islands	5,113	5,913
Chile	31,288	32,801	Gilbert and Ellice Islands ..	4,857	4,828
New Caledonia ..	27,711	30,367	Nauru	4,493	4,193
Fiji	28,752	29,563	New Guinea ..	2,553	3,294
Peru	20,325	22,708			

The quantity of bunker coal taken from Australia by oversea vessels in 1924–25 was about 1,120,000 tons, of which 953,000 tons were supplied by New South Wales.

The distribution of the total output from New South Wales collieries during the last five years was as follows, the particulars given of quantity exported including coal shipped as bunker coal:—

COAL.—DISTRIBUTION OF OUTPUT, NEW SOUTH WALES, 1920 TO 1924.

Year	Exports to Australian Ports.	Exports to Foreign Ports.	Local Consumption.	Total.
	Tons.	Tons.	Tons.	Tons.
1920	2,270,556	2,716,235	5,729,208	10,715,999
1921	2,752,810	2,771,949	5,268,628	10,793,387
1922	2,841,253	2,398,144	4,943,736	10,183,133
1923	2,518,579	2,381,549	5,578,385	10,478,513
1924	3,096,881	2,317,063	6,204,272	11,618,216

Of the total coal exports from New South Wales, amounting in 1924 to 5,414,000 tons, about 4,688,000 tons were shipped from the port of Newcastle.

The figures quoted are given on the authority of the New South Wales Mines Department.

5. **Consumption in Australia.**—An estimate of the consumption of coal in Australia may be arrived at by adding the imports to the home production, and deducting the exports (including bunker coal taken by oversea vessels). The following table shows the consumption computed in the manner specified, for the last five years:—

COAL.—CONSUMPTION, AUSTRALIA, 1920 TO 1924.

Year.	Quantity of Coal Consumed.		
	Home Produce.	Produce of Other Countries.	Total.
	Tons.	Tons.	Tons.
1920	10,132,442	26,828	10,159,270
1921	9,776,978	9,457	9,786,435
1922	9,531,274	46,620	9,577,894
1923	10,022,228	62,660	10,084,888
1924	11,395,631	9,234	11,404,865

The bunker coal taken away in 1924 was estimated at 1,197,000 tons.

6. **Prices.**—(i) *New South Wales.* The price of New South Wales coal depends on the district from which it is obtained, the northern district coal always realizing a much higher rate than the southern or western product. The average price on the mine in each district and for the State as a whole during the last five years was as follows :—

COAL.—PRICES, NEW SOUTH WALES, 1920 TO 1924.

Year.	Northern District.	Southern District.	Western District.	Average for State.
	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.
1920	15 3	13 4	11 8	14 5
1921	17 7	16 6	12 10	16 10
1922	17 6	16 3	12 8	16 9
1923	17 7	16 1	11 5	16 5
1924	17 8	16 2	11 2	16 7

(ii) *Victoria.* In Victoria the average price of coal in 1920 was 21s. ; in 1921, 23s. 5d. ; in 1922, 23s. 9d. ; in 1923, 22s. ; and in 1924, 21s. per ton. These averages are exclusive of brown coal, the production of which in 1924 was valued at 6s. 5d. per ton.

(iii) *Queensland.* Prices in the principal coal-producing districts during the last five years were as follows :—

COAL.—PRICES, QUEENSLAND, 1920 TO 1924.

District.	Value at Pit's Mouth.				
	1920.	1921.	1922.	1923.	1924
	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.	Per ton. s. d.
Ipswich	14 7	16 6	16 8	16 11	16 8
Darling Downs	16 7	18 10	18 11	19 1	18 10
Wide Bay and Maryborough	23 3	27 3	27 2	25 0	24 3
Rockhampton	16 1	15 6	16 5	15 5	15 0
Clermont	13 0	14 4	13 10	12 10	11 0
Bowen (State Coal Mine) ..	15 10	16 3	16 1	16 0	16 5
Mount Mulligan (Chillagoe)	19 0	19 10	20 0	22 6	29 6
Average for State ..	15 2	17 5	17 6	17 5	17 8

The readjustment of prices and wages in the industry was responsible for the increases in the averages during the last four years.

(iv) *Western Australia.* The average price of the Collie (Western Australia) coal during the last five years was as follows :—In 1920, 15s. 2d. ; in 1921, 17s. 4d. ; in 1922, 17s. 5d. ; in 1923, 17s. 6d. ; and in 1924, 17s. 3d. per ton.

(v) *Tasmania.* The average price per ton of coal at the pit's mouth in Tasmania for the five years 1920 to 1924 was :—In 1920, 16s. 11½d. ; in 1921, 19s. 1d. ; in 1922, 17s. 7d. ; in 1923, 17s. 6d. ; and in 1924, 17s. 6d. per ton.

7. **Prices in the United Kingdom.**—During the five years 1920 to 1924 the average value of coal at the pit's mouth in the United Kingdom was :—In 1920, 34s. 7d. ; in 1921, 26s. 2d. ; in 1922, 17s. 7d. ; in 1923, 18s. 9¾d. ; and in 1924, 18s. 10d. per ton.

8. **Employment and Accidents in Coal Mining.**—The number of persons employed in coal mining in each of the States during the year 1924 is shown below. The table also gives the number of persons killed and injured, with the proportion per 1,000

employed, while further columns are added showing the quantity of coal raised for each person killed and injured, this being a factor which must be reckoned with in any consideration of the degree of risk attending mining operations. A further table gives the rate of fatalities during the last five years.

According to the report of the Chief Inspector of Mines for Great Britain, the average death-rate per 1,000 miners from accidents in coal mines during the quinquennium 1920–24 was 0.91, the rates varying between 1.06 in 1923, and 0.66 in 1921, while, as shown in the table following, the rate for Australia for the same period was 1.53. In the United States the fatality rate per 1,000 employees averaged 4.41 during the five years 1920–24, the rates varying from 3.78 in 1920 to 4.88 in 1922.

COAL MINING.—EMPLOYMENT AND ACCIDENTS, 1924.

State.	Persons Employed in Coal Mining.	No. of Persons.		Proportion per 1,000 Employed.		Tons of Coal raised for each Person.	
		Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales ..	23,030	27	80	1.17	3.47	430,300	145,200
Victoria	2,289	3	17	1.31	7.43	215,300	38,000
Queensland ..	2,828	1	73	0.35	25.81	1,123,000	15,400
Western Australia ..	673	1	70	1.49	104.00	421,900	6,000
Tasmania	269	..	5	..	18.59	..	15,200
Total ..	29,089	32	245	1.10	8.42	433,900	56,700

The figures for New South Wales include 6 shale miners. Owing to lack of uniformity in the definition of "injury," the figures relating to persons injured possess little value.

The next table shows the average number of miners employed, number of fatalities, and rate per 1,000 during the quinquennium 1920–24 :—

COAL MINING.—FATALITIES, 1920 TO 1924.

State.	Average No. of Coal Miners.	Average No. of Fatal Accidents.	Rate per 1,000 Employed
New South Wales	21,777	21.8	1.00
Victoria	2,077	2.0	0.96
Queensland	2,590	17.4	6.72
South Australia	4	..	..
Western Australia	766	0.6	0.78
Tasmania	253	0.2	0.79
Total	27,467	42.0	1.53

Figures for coal miners in South Australia appear for the first time in 1922, the miners being engaged chiefly on work in connexion with the brown coal deposits.

The abnormally heavy rate in Queensland is due to the inclusion of the 75 deaths in 1921 caused by the disastrous explosion of coal-dust at Mount Mulligan. For the quinquennium 1916–20 the Queensland rate was 1.79, and for the whole of Australia 1.14.

§ 11. Coke.

1. **Production.**—Notwithstanding the large deposits of excellent coal in Australia, there was, prior to the war, a fairly considerable amount of coke imported from abroad. During recent years, however, a high standard of excellence has been attained in the local product, and the necessity for import has to a large extent disappeared. During the year 1924–5 the coke imported amounted to 29,000 tons, chiefly obtained from the

United Kingdom, the bulk of the product being taken by South Australia. The table hereunder gives the production in New South Wales during the last five years :—

COKE.—PRODUCTION, NEW SOUTH WALES, 1920 TO 1924.

Year	1920.	1921.	1922.	1923.	1924.
Quantity .. tons	567,569	592,097	240,229	580,374	564,372
Value, total .. £	844,191	1,029,694	382,926	941,323	932,926
Value, per ton	29s. 9d.	34s. 9d.	31s. 10d.	32s. 5d.	33s.

During recent years the industry has made considerable progress, and with the development of local iron and steel works, as well as metal refineries and smelting establishments, its future prospects ought to be assured. The heavy decline in quantity and value of coke made in 1922 was due to the lessened demand consequent on the closing down of the steel works at Newcastle, while the improvement manifested in 1923 was resultant on the recommencement of operations.

A small quantity of coke is made in Queensland, the quantity returned in 1924 being 7,116 tons, but the bulk of that used in ore reduction is imported, mainly from New South Wales. The following table shows the amount manufactured locally during the last five years :—

COKE.—PRODUCTION, QUEENSLAND, 1920 TO 1924.

Year	1920.	1921.	1922.	1923.	1924.
Quantity .. tons	19,653	7,557	6,748	5,244	7,116

Information regarding the exact quantity of coke imported from New South Wales and elsewhere is not available.

In order to avoid duplication with coal values the returns for coke have not been included in the general tables of mineral production in the early part of this chapter.

§ 12. Oil Shale and Mineral Oil.

1. **Production.** (i) *New South Wales.* The production of kerosene shale amounted during 1924 to 642 tons, valued at £962, as compared with 32,489 tons valued at £77,380 in 1921, the reduction being due to the closing down of the shale mines at Newnes. The Murrurundi shale mine has been taken up by a company which is experimenting with the Bronder retort. It is estimated that the total quantity of shale in the State amounts to 40 million tons, but its profitable exploitation depends on economic methods of production. Up to date there has been no production of petroleum in the State, but boring operations were continued in the Tamworth division, and several areas have been taken up for the purpose of boring in the Picton division. The prospects of striking flow oil in the area known as the Belford Dome in the Hunter River district are regarded as encouraging, and a grant of £22,500 in aid of boring has been allocated by the Federal Government for expenditure in this area.

(ii) *Victoria.* Up to the present no extensive deposit of oil shale has been located in Victoria. Bores in search of oil have been put down from time to time, but so far without result, and the State geological authorities take an unfavourable view of the prospects of obtaining it.

(iii) *Queensland.* Operations were vigorously carried on in 1924 by the Lander Oil Co. at Orallo. The original bore was deepened to 2,700 feet, but, owing to an accident with the boring tools, was abandoned, and a new bore started on the 23rd October had penetrated to 1,350 feet at the close of the year. Prospecting was continued in the

Beaudesert, Tewantin, and Wolston districts. (See also Official Year Book No. 18, p. 801.) It is stated that one of the causes of the delay in the discovery of petroleum is the absence of signs which would strike the eye of the bushworker, the soil mantle, and the superposed cretaceo-tertiary obscuring the earth structure in the underlying beds. Bores in the vicinity of Longreach have yielded petroliferous gas and wax, and there seems to be evidence that the Mesozoic strata are oil-bearing. The Commonwealth Government proposes to allot a sum of £5,000 to assist in geological survey work in the Longreach, Blackall, and Ruthven areas.

(iv) *South Australia.* Bitumen is occasionally washed up on the southern coasts of the continent from Port Davey in Tasmania to Cape Leeuwin in Western Australia. Specimens found on Kangaroo Island at one time led to the belief that they were the product of a terrestrial petroliferous area. Similar occurrences of this mineral have been reported from the coasts of California, South Africa, and New Zealand. In 1920 the finding of accumulations of oily matter on the shores at Encounter Bay and Kangaroo Island was reported, but investigations by the Mines Department into the geological conditions of the surrounding country do not encourage the hope that the matter is of local origin. It is stated, however, that the prospects appear favourable over an area in the desert region near Lake Eyre, and in the Coorong district.

(v) *Western Australia.* In this State the chief interest in the search for oil centres in the Kimberley division. At Mount Wynne, in West Kimberley, the gas which bubbles freely in a hot spring has been found to contain hydrocarbons. Indications of free petroleum have been obtained in bores on Price's Creek, about 100 miles south-east of Mount Wynne, and traces of mineral oil have been detected in a seepage. In East Kimberley a black bitumen, residual from an asphaltic oil, has been found in weathered basalt in two localities 5 miles apart, thus indicating the former circulation of petroleum in the area. Boring operations were in progress during 1924 at "Freney's" in the Northern area, and encouraging indications have been noted. The Commonwealth Government proposes to allot a sum of £22,500 in aid of boring on the Fitzroy River and in the Price's Creek area.

(vi) *Tasmania.* Oil shale has been discovered in the basins of the Mersey, Don, and Minnow Rivers, and elsewhere, and the Government Geologist estimates the probable capacity of the beds at 12,000,000 tons. Production during the last ten years has, however, been small. For 1924 the output was 1,576 tons, valued at £1,526. Successful exploitation of the vast areas available depends on the discovery of an economic method of retorting the shale.

(vii) *Northern Territory.* Considerable activity has been displayed during recent years by speculators in acquiring areas under coal and oil prospecting licences along the north-western boundary of the Territory, and northerly along the western coast to the Daly River, but so far no developments have been recorded, although what are regarded locally as good indications of oil have been discovered. Many of the licences have been forfeited, and, so far, no success has attended the boring operations at Elcho Island.

(viii) *Papua.* In 1911 indications of petroleum were reported near the Vailala River, and, acting on the reports of geologists, an oil expert was despatched by the Commonwealth Government to sink trial bores on the site. Early in 1913 a small quantity of oil was obtained from a shallow bore. Later on, extensive geological surveys were made of the country between Yule Island and the Purari Delta, and oil was encountered in several trial bores. In 1919 the Anglo-Persian Oil Co., under agreement with the British and Commonwealth Governments, and latterly with the Commonwealth Government only, has been engaged in work on the field. A geological survey and examination has been made of the Papuan Gulf Coast north-west from Yule Island to the Kapuri River district, and a re-examination of areas in the Vailala River area.

(ix) *New Guinea.* At Matapau, about 54 miles from Aitape on the north coast of what was formerly German New Guinea, oil has been struck in a shallow bore, and hopes are entertained that the product will be encountered in large volume at a greater depth. In 1924 there were in force 26 licences to prospect for mineral oil and coal, covering an area of about 25,000 square miles.

2. **Expert's Report.**—A report by Dr. Wade presented to the Senate in October, 1924, by the Minister for Home and Territories was generally unfavourable to the prospects of finding commercial supplies of petroleum in the northern portions of Western Australia and the Northern Territory. The report points out that the marginal areas on the Fitzroy apparently offered the best possibilities, and special mention was made of the Price's Creek region, although the structure there was not satisfactory in regard to present geological knowledge. It was recommended that the district should be tested with boring plant capable of penetrating to a depth of between 3,000 and 4,000 feet. Allusion was also made to the possibility of locating oil in the Belford Dome area in New South Wales.

3. **Exports.**—During the last five years the exports of kerosene shale have been trifling, only 11 tons being shipped from New South Wales in 1923–24, and 1 ton in 1924–25.

4. **Mineral Oil Bounties.**—A statement regarding the bounties payable in respect to oil produced in Australia from mined kerosene shale was given in Official Year Book 17, p. 805. The Act was further amended in 1923. Bounty to the amount of £335 was paid in 1924–25, but there were no payments in the year 1925–26. The offer by the Commonwealth Government of a reward up to £50,000 for the discovery of oil in Australia was withdrawn in 1925, and under the Petroleum Prospecting Act of 1926 a sum of £60,000 was allocated for providing aid to persons or companies engaged in the search for oil and to assist in geological survey work. Of the total amount, it is proposed to allocate £22,500 in aid of operations on the Fitzroy River and Price's Creek in Western Australia, £22,500 to the Belford Dome area in New South Wales, £5,000 for geological survey work in the Longreach, Blackall, and Ruthven areas in Queensland, while the balance of £10,000 is reserved by the Commonwealth Government to assist boring operations in other localities where geological evidence justifies expenditure.

§ 13. Other Non-metallic Minerals.

1. **Alunite.**—The production of this mineral in New South Wales amounted during 1924 to 1,008 tons, valued at £4,032, raised in the Bullahdelah division. The mineral is sent to England for treatment, and, to the end of 1924, the exports were 57,000 tons, valued at £204,000.

In South Australia an extensive deposit of the mineral was located in 1913 at Carrickalinga Head, on the coast north of Normanville, and within a short distance of Adelaide. Fresh discoveries were later reported on the western shores of St. Vincent's Gulf. The mineral returns show a production of 95 tons in 1922, but none was recorded in 1923 and 1924.

The exploitation of the alunite deposits in the North-East Coolgardie field in Western Australia has been retarded pending the result of field experiments to determine the suitability or otherwise of the product as a fertilizer in its unroasted state. Deposits of the mineral are also found in the Kalgoorlie area.

2. **Asbestos.**—This substance has been found in various parts of Australia, but up to the present has not been produced in any considerable quantity. In New South Wales there was no production in 1924, the mines at Wood's Reef in the Barraba division having been abandoned towards the end of 1923. In Queensland seams of asbestos have been found over a belt of country extending from Cawarral to Canoona, as well as in other districts. Samples of the fibre proved suitable for the manufacture of fibro-cement sheeting and tiles, but so far the deposits have not been commercially exploited. Deposits of asbestos have been located at various places in South Australia. Production in 1924 amounted to 80 cwt., valued at £80. Chrysotile asbestos of high grade is found in various localities in Western Australia, particularly in the Serpentine rocks between Nullagine and Roeburne, over a distance of 200 miles. The production in 1924 amounted to 74 tons, valued at £2,206, obtained in the Nullagine district of the Pilbara gold-field. In 1918, 2,854 tons of asbestos, valued at £5,008, were produced in Tasmania. A small quantity was raised in 1919, but there was no production during the last five years.

3. **Barytes.**—In New South Wales large quantities of this mineral are available at Kempfield in the Trunkey division, but the production in 1924 amounted to only 150 tons, valued at £300. The production in South Australia during 1924 was given as 1,898 tons, valued at £5,694. In this State there are extensive deposits of the mineral at Noarlunga and Pernatty Lagoon. First class ore is found near Truro in the hundred of Dutton. and the mineral is also worked near Williamstown. High grade natural white barytes is obtained from some of the workings, but a large amount of lower grade ore is discarded or wasted owing to lack of facilities for cleaning and bleaching. Barytes in fair-sized veins occurs at many places in Western Australia, especially at Cranbrook in the south-west division. The export in 1921 was, however, small, being valued at under £20, and none was recorded in 1923 and 1924. About 1,000 tons of barytes, valued at £4,000. were produced in Tasmania in 1920, the greater portion being won from deposits near Queenstown and Mt. Jukes, and the balance from Beulah and elsewhere, but there was no production recorded in the last four years.

4. **Clays and Pigments.**—Valuable deposits of clays and pigments of various sorts are found throughout Australia. There is a considerable local production of earthenware, bricks, and tiles, but the finer clays have not as yet been extensively used. In New South Wales the production of pigments amounted in 1924 to 738 tons, valued at £942. About 300 tons of yellow ochre were raised at Delroy in the Dubbo division, and 328 tons of pigment material were obtained in the Burrabadine area. Small quantities of yellow ochre were raised in the Goulburn division, and of red ochre and umber in the Gulgong division. About 3,000 tons of white clay, valued at £2,900, were raised from various areas during the year, deposits at Lidsdale in the Lithgow division being found very suitable for the making of high grade porcelain ware. In Victoria 1,741 tons of kaolin, valued at £2,683 were produced in 1924 from deposits at Stawell, Mt. Egerton, Bendigo, and Pyalong, and 76 tons of pigment clays, valued at £514, were raised from leases at Ballarat and Warragul. In Queensland, 5,107 tons of fireclay, valued at £1,341, were mined during 1924 in the Mount Morgan district. Deposits of fine white clay have been located near Wondai and Kingaroy. In South Australia ochre is obtained at the Copper King pigment mine near Beltana, and is also raised near Oodnadatta. Production in 1924 amounted to 710 tons, valued at £4,260. Red oxide of suitable quality as well as ochres of various hues have been found in different and widely-separated localities in Western Australia. A paint and distemper factory has been established in Perth, and this, coupled with the demand from the Eastern States, will further stimulate the search for the necessary materials. Investigation has proved the existence of a deposit of a fine white-ware clay about 4 miles from the railway at Wagin. Porcelain and other clays of good quality have been found in Tasmania at Beaconsfield, Sorell, Hagley, etc. Oil and water paints have been made from coloured ochres from Sorell, and deposits of ochre have been located near Mowbray and Beaconsfield. The production of ochre in 1921 was returned at 15 tons, valued at £56, but none was recorded in 1922 and 1923. In 1924 the output was 20 tons, valued at £50.

5. **Felspar.**—During 1924, the production of this mineral in New South Wales was 15 tons, valued at £15, raised in the Lithgow division. A fairly extensive deposit of felspar has been located at Black Ridge near Williamstown in South Australia, but further development is required to ascertain its economic value. About 60 tons of felspar, valued at £485, were exported during 1922 from Western Australia, but none was recorded in 1923 and 1924. A large deposit of the mineral has been located near Jacob's Siding, and it also occurs in the Coolgardie area.

6. **Fluorspar.**—At Carboona in the Tumbarumba division in New South Wales this mineral is mined with silver and lead, the production in 1924 amounting to 470 tons. In Victoria 196 tons, valued at £625, were raised in 1921 by a company operating at Walwa, but none was recorded in 1923 and 1924. A high grade fluorspar occurs at the Perseverance mine on the Chillagoe railway in Queensland. Production in 1924 amounted to 1,864 tons, valued at £5,240.

7. **Fuller's Earth.**—About 50 tons of this material, valued at £150, were produced in 1924 from deposits in the Boggabri area of the Narrabri division, New South Wales. A large deposit of excellent quality has been located near Jennacubbine in Western Australia.

8. **Graphite.**—Graphite is found in New South Wales near Undercliff Station, in the county of Buller, but none was raised in 1924. In Victoria the mineral occurs in Ordovician slates in several of the gold-fields, but is not worked. In Queensland graphite was raised some years ago by the Graphite Plumbago Company at Mt. Bopple, near Netherby, on the Maryborough-Gympie line. There has been no production in recent years, and it is stated that the prospects are not promising for flake graphite, although encouraging for the amorphous variety. In South Australia deposits are found at various places in Eyre's Peninsula. While a large proportion of the product is not suitable for commercial use, the work so far done shows that flake graphite containing as high as 80 per cent. carbon can be obtained. The Government is offering a bonus of £1 per ton for the production of graphite containing not less than 80 per cent. carbon, and on graphite with a smaller percentage, a bonus proportionate to the carbon content. In Western Australia deposits occur at Munglinup Creek, near the Oldfield River, on the Pallinup River in the Kent District, at Northampton, in the Murchison division, and on the Donnelly River at Kendenup, about 40 miles from Albany. Production in 1920 was small, amounting to 13 tons, valued at £130, but practically none was recorded during the last four years. Several deposits of graphite have been found near the Golden Dyke mine in the Northern Territory, but their value has not yet been determined.

9. **Gypsum.**—The output of gypsum in New South Wales during 1924 was 2,666 tons, valued at £1,236, of which 670 tons were raised in the Hay division, and 1,996 tons in the Hillston division. In Victoria during 1924 there was a production of 13,268 tons, valued at £11,818, of which 1,892 tons were raised from leases at Boort; 703 tons at Cowangie; 4,871 tons at Waitchie; 3,078 tons at Bolton; and 2,724 tons at Lake Boga. Numerous deposits of gypsum are found in Southern Yorke's Peninsula, and on the coast near Fowler's Bay, in South Australia, the quantity available being large and of high quality. The production in 1924 amounted to 65,690 tons, valued at £57,479, the largest yet recorded. A considerable quantity is used in the manufacture of plaster and cement, as well as for agricultural purposes. Gypsum is widely distributed in Western Australia in tertiary and late tertiary deposits associated chiefly with the salt lakes of the arid regions of the interior south of the tropics. Many of these lacustrine deposits are capable of yielding large tonnages. The production in 1924 amounted to 4,237 tons, valued at £5,278, of which 1,518 tons were raised at Woolundra; 1,234 tons at Koorda; 641 tons at Hines Hill; 487 tons at Dukin; and 357 tons at Baandee.

10. **Magnesite.**—Deposits of this mineral have been discovered at several localities in New South Wales. During 1924 the output was 12,496 tons, valued at £12,772, of which about 9,000 tons were raised at Attunga in the Tamworth division, and 2,451 tons in the Fifield division. In addition, small quantities were raised from deposits in the Barraba and Cobar divisions. The mineral is found at Heathcote in Victoria, where 76 tons, valued at £228, were produced in 1924. There are deposits in the neighbourhood of Rockhampton and Bowen in Queensland, and in 1924 an output of 149 tons was recorded from the Rockhampton area. A deposit of exceptional purity has been located in the vicinity of Tumby Bay in South Australia, about five miles from the township of Tumby, and the mineral is also found near Copley. The Broken Hill Co. is working a small deposit near the Beetaloo Waterworks. Production in 1924 amounted to 129 tons, valued at £323. A large area of magnesite-bearing country has been located in Western Australia at Bulong, about 20 miles east of Kalgoorlie, and deposits have also been found at Coolgardie and other places. The mineral is of a high degree of purity, but there has been no production of importance since 1915, and 2 tons only were recorded in 1923 and none in 1924.

11. **Mica.**—Mica is found at various places in Australia, and deposits of considerable extent have been located in the Hartz Range in the Northern Territory. Production from these deposits in 1924 amounted to 5,281 lb., valued at £2,719.

12. **Phosphate Rock.**—During 1924, 107 tons of phosphate, valued at £209, were obtained in New South Wales, of which 50 tons were won in the Molong division, 42 in the Inverell division, and 15 in the Kempsey division. In Victoria 532 tons, valued at £532, were raised at Mansfield. The production in Queensland amounted in 1922 to 65 tons valued at £279, raised by the Holbourne Island Phosphate Company in the Bowen district. Difficulty in finding a market for the product was responsible for the

small output, and none was raised in 1923 and 1924. South Australia possesses deposits scattered over a belt of country 200 miles in length, from Myponga in the south to the district round Carrieton, in the north. Production in 1921 amounted to 5,079 tons, valued at £6,203, in 1922 to 2,715 tons, valued at £3,678, but in 1923 there was a decline to 446 tons, valued at £592, and only 84 tons were raised in 1924. It is stated that the industry is meeting with severe competition in the high grade phosphate imported from Nauru. Deposits of guano and phosphate have been found in caves between 27 and 40 miles to the north-east of Carrieton, but they are not of sufficient value to warrant exploitation. Natural ammonium sulphate and chloride associated with guano have been found in a cave deposit in the Flinders Ranges about 78 miles easterly from Copley. In Western Australia the known phosphate deposits occur principally on the coastal islands, and in portion of the coastal plain between Dongarra and Perth. Some years ago guano digging on the islands was a large and profitable industry.

13. **Salt.**—Salt is obtained from salt lakes in the Western and North-Western districts of Victoria, and from salterns in the neighbourhood of Geelong. Figures regarding production are, however, not available for publication. Large quantities are obtained from the shallow salt lakes of South Australia, chiefly on Yorke Peninsula. Lake Hart, about 60 square miles in area, situated about 120 miles N.W. from Port Augusta, contains immense supplies of salt of good quality, which at present, however, owing to distance from market, possess no economic value. The salt is simply scraped from the beds of the lakes in summer time and carted to the refinery. It is stated that care must be taken not to leave too thin a crust of salt over the underlying mud, as the resultant " crop " after the winter rains will in that case be smaller than usual. During recent years a fair amount has been produced by evaporation of sea water at the heads of Spencer's and St. Vincent's Gulfs. About 63,000 tons of crude salt, valued at £141,000, were produced during 1924. In Western Australia salt is obtained from depressions in the calcareous sandstones of the coast, which are filled to a shallow depth in winter with salt water. In summer the depressions dry up, leaving a layer of salt two or three inches thick, which is collected and refined. Up to the present, the four chief localities producing salt were Rottnest Island, off Fremantle; Middle Island, near Esperance; Yarra Yarra Lakes, near Three Springs; and Lynton, near Port Gregory There is a very large number of salt and brine lakes which may ultimately be used as sources of salt.

14. **Diatomaceous Earth.**—Although this mineral has been found at various localities in New South Wales, the deposits have not been worked commercially on any considerable scale. The output in 1924 was 564 tons, valued at £1,092, of which 500 tons were raised in the Coonabarabran division, and 64 tons in the Barraba division. Part of the product is used as a filtering medium in the manufacture of gelatine, and part for the manufacture of metal polish in powdered and liquid form. In Victoria there is a remarkably pure deposit at Lillicur, near Talbot, while beds of the mineral are also met with at other places in the Loddon Valley, near Ballarat, at various places close to Melbourne, at Craigieburn, Lancefield, Portland, Swan Hill, Bacchus Marsh, etc. During 1920, a production of 1,000 tons, valued at £5,000, was recorded, but no production was returned for 1921 to 1924. Fairly extensive deposits of diatomite exist in Queensland, in the Nerang, Beaudesert, and Canungar areas, but the various outcrops have as yet been only partly examined. In Tasmania a deposit of diatomaceous earth has been located at Oatlands, but its use for the manufacture of explosives is apparently prejudiced by the circumstance that the diatoms are pulverized and contaminated with clay.

§ 14. Gems and Gemstones.

1. **Diamonds.**—It is difficult to secure accurate returns in connexion with the production of precious stones, but the yield of diamonds in 1924 in New South Wales was estimated at 284 carats, valued at £498, while the total production to the end of 1924 is given at 202,000 carats, valued at £144,000. The yield in 1924 was obtained almost entirely by individual miners at Copeton in the Tingha division. A considerable amount of prospecting work has been carried out at Red Hill in the Crookwell division, and some of the diamonds already won have been sent to Amsterdam to be cut and polished in order to ascertain the marketable qualities of the stones. Small quantities

of diamonds are found in Victoria in the gravels of streams running through granite country in the Beechworth district, at Kongbool in the Western District, and near Benalla. The stones are generally small, and the production up to date has been trifling. In 1912, eleven small diamonds, valued at £20, were picked out of the sluice boxes of the Great Southern alluvial mine at Rutherglen. In Queensland a discovery was made in 1924 at Diamond Vale, about 2 miles east of Stanthorpe, the stones being found in alluvial tin wash. A flawless green diamond weighing 1 carat, a slightly smaller green, and a white weighing 1 carat, were recovered. The green diamond is extremely rare, and a specimen weighing 1½ carats, exhibited at Wembley Park, was valued at £1,750. In South Australia diamonds have been found on the Echunga gold-fields, the most notable gem being Glover's diamond, which was sold for £70. A few small diamonds have been found in the Pilbara district in Western Australia. Small diamonds have, from time to time, been found in Tasmania, chiefly while sluicing for gold in the Donaldson district.

2. **Sapphires.**—The production of sapphires in New South Wales during 1924 was returned as 2,713 ozs., valued at £5,659, obtained at Sapphire and Nullamanna in the Inverell division. It is probable that the output is understated owing to the difficulty of obtaining accurate returns from individual miners and prospectors. A fair quantity of machine stones, zircon and corundum, was also raised, but no sales thereof were effected.

In Queensland, 15,014 ozs. of sapphires to the value of £24,339 were obtained in 1924 on the Anakie mineral field. Fancy stones occasionally bring high prices, and a yellow sapphire weighing 6½ dwt., found in 1923 at Iguana Flat, was purchased for £100. A 14-carat yellow, cut by the local lapidary in 1924, was also valued at £100. Some fine stones were found during this year, including a green weighing 10½ carats, and a pure red ruby weighing 4 carats. There is a lapidary on the Anakie field, but many stones are sent away for cutting.

Sapphires are plentifully found in the tin drifts of the Ringarooma and Portland districts in Tasmania, but the stones are, as a rule, small and not worth saving.

3. **Precious Opal.**—The estimated value of the opal won in New South Wales during the year 1924 was £10,500, the whole of the yield being obtained on the Lightning Ridge field, where there still remains an area of 12,000 acres of opal-bearing country of which little has been prospected. Some very fine stones are at times obtained, one weighing 5 ozs. and valued at £300 being recovered in 1911. Occasionally, black opals of very fine quality are found, one specimen from the Wallangulla field, weighing 6½ carats, being sold in 1910 for £102, while in the early part of 1920 a specimen realized £600. It is stated that this locality is the only place in the world where the "black" variety of the gem has been found. The total value of opal won in New South Wales since the year 1890 is estimated at £1,540,000.

Small quantities of precious opal are found in the Beechworth district in Victoria.

The opaliferous district in Queensland stretches over a considerable area of the western interior of the State, from Kynuna and Opalton as far down as Cunnamulla. The yield in 1924 was estimated at £300, and up to the end of that year at about £181,000. These figures are, however, merely approximations, as large quantities of opal, of which no record is obtained, are disposed of privately. At present the industry, which is not followed by practical miners, suffers from the peculiar disability that in good seasons there is plenty of work available on the pastoral stations, and most men prefer this to the uncertain results obtainable by fossicking, while in dry seasons, when constant work is not obtainable, the search for opal is blocked by the absence of grass and water on the fields.

Owing to difficulty in disposing of the product, little mining was carried on in 1924 at the Stuart's Range opal field in South Australia, the estimated value of the production being £4,000. The field is extremely prolific, and only a small portion of the known opal-bearing area has been tested. A fine collection of gems from this field was dispatched to the British Empire Exhibition.

According to a report a few years ago by the Australian Trade Commissioner in the East there is a good sale for the gems in China. It is stated that there is no difficulty in cutting and polishing, as the Chinese method of dealing with jade, dating back many centuries, can also be applied to opal.

4. Other Gems.—Various other gems and precious stones have from time to time been discovered in the different States, the list including agates, amethysts, beryls, chiastolite, emeralds, garnets, olivines, moonstones, rubies, topazes, tourmalines, turquoises, and zircons.

§ 15. Numbers Engaged, Wages Paid, and Accidents in Mining.

1. Total Employment in Mining.—The number of persons engaged in the mining industry in Australia fluctuates according to the season, the price of industrial metals, the state of the labour markets, and according also to the permanence of new finds, and the development of the established mines. During the year 1924 the number so employed was as follows :—

NUMBER OF PERSONS ENGAGED IN MINING, 1924.

State.	Number of Persons engaged in Mining for—						Total.
	Gold.	Silver, Lead, and Zinc.	Copper.	Tin.	Coal and Shale.	Other.	
New South Wales ..	1,014	5,468	52	1,004	23,030	2,616	33,184
Victoria	2,651	..	..	2	2,289	148	5,090
Queensland	452	759	1,017	698	2,828	601	6,355
South Australia	30	12	34	..	..	789	865
Western Australia ..	5,296	141	110	40	673	29	6,289
Tasmania	128	479	532	781	291	400	2,611
Northern Territory ..	18	15	12	115	..	42	202
Australia	9,589	6,874	1,757	2,640	29,111	4,625	54,596

Included in the figures for "other" in South Australia were 411 engaged in mining for iron, 120 gypsum miners, and 154 salt gatherers. The Tasmanian figures include 134 osmiridium miners, and those for the Northern Territory 40 mica miners.

The following table shows the number of persons engaged in mining in Australia during each of the years 1891, 1901, and 1924, together with the proportion of the total population so engaged :—

NUMBER ENGAGED IN MINING PER 100,000 OF POPULATION, 1891, 1901, AND 1924.

State.	1891.		1901.		1924.	
	Miners employed.	No. per 100,000 of Population.	Miners employed.	No. per 100,000 of Population.	Miners employed.	No. per 100,000 of Population.
New South Wales	30,604	2,700	36,615	2,685	33,184	1,487
Victoria	24,649	2,151	28,670	2,381	5,090	310
Queensland	11,627	2,934	13,352	2,664	6,355	770
South Australia	2,683	834	7,007	1,931	865	163
Western Australia	1,269	2,496	20,895	11,087	6,289	1,749
Tasmania	3,988	2,695	6,923	4,017	2,611	1,216
Northern Territory ..	..	..	..	..	202	5,606
Australia	74,820	2,341	113,462	2,992	54,596	940

The general falling-off since 1901 is due to the stagnation caused by the war, the low price of industrial metals, and largely to the decline in the gold-mining industry.

2. Wages Paid in Mining.—Information regarding rates of wages paid in the mining industry, which in earlier issues of the Year Book was given in this chapter, is now contained in the Labour Report issued by this Bureau.

3. Accidents in Mining, 1924.—The following table gives particulars of the number of men killed and injured in mining accidents during the year 1924 :—

MINING ACCIDENTS, 1924.

Mining for—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
				KILLED.				
Coal and shale	27	3	1	..	1	..	..	32
Copper ..	..	..	2	..	..	..	..	2
Gold ..	1	..	..	..	7	..	..	8
Silver, lead, and zinc ..	8	..	..	..	2	..	..	10
Tin	1	..	1	..	..	..	..	2
Other minerals	..	..	..	1	..	..	..	1
Total ..	37	3	4	1	10	..	..	55
				INJURED.				
Coal and shale	80	17	73	..	70	5	..	245
Copper ..	..	..	11	..	..	13	..	24
Gold ..	..	2	..	..	160	..	..	162
Silver, lead, and zinc ..	52	..	2	..	..	12	..	66
Tin	..	..	2	..	..	10	..	12
Other minerals	1	..	..	1	1	2	..	5
Total ..	133	19	88	1	231	42	..	514

The number killed in mining accidents in 1924 was considerably less than that for 1921 when 132 deaths were recorded, the figures for the earlier year being swollen by the 75 fatalities in the Colliery disaster at Mount Mulligan in Queensland.

§ 16. Government Aid to Mining.

1. Commonwealth.—Assistance to mining is given by the Commonwealth under the provisions of the *Precious Metals Prospecting Act* 1926, and the *Petroleum Prospecting Act* 1926.

The first-mentioned Act provides for a sum of £40,000, of which £15,000 is to be expended in the Northern Territory, and the balance is to be allocated to the States in such proportions as the Minister determines.

Under the Petroleum Prospecting Act a trust account of £60,000 is established to assist in the search for oil. The Minister may make advances out of the money standing to the credit of this account to persons or companies engaged in the search for oil, and to assist persons, companies, or State Governments to make geological surveys.

2. New South Wales.—The chief aid given in this State is in the direction of assistance to prospectors. Up to the end of 1924 the total sum expended in this manner amounted to £552,722, of which £10,673 was advanced in 1924. A sum of £750 was made available during the year for the purpose of assisting in the erection of crushing batteries or reduction plants, but no advances were made therefrom. The reward for the discovery of new mineral fields within the State has been increased from £500 to £1,000, with provision for sums of £200 and £500 in respect of fields not large enough to qualify for the full amount, and the conditions have been made more liberal.

3. **Victoria.**—Since the passage of the Mining Development Act in 1897, the expenditure under its varying provisions has been £1,209,334, of which £287,000 was disbursed in connexion with advances to companies, £326,000 on boring, £247,000 on mining enterprise, £101,000 on advances to miners, £93,000 on maintenance, removal, etc., of batteries, and about £95,000 in connexion with the State brown coal mine. The expenditure for the financial year 1924–1925 amounted to about £30,000, of which £12,000 was spent on boring, £5,600 on advances to companies, £3,600 on testing plants, £3,200 on mining development, and £2,200 on geological surveys.

4. **Queensland.**—State assistance to the mining industry in 1924 amounted to £11,788, of which £1,862 consisted of loans in aid of deep sinking; £7,991 grants in aid of prospecting, and £1,935 in aid of roads and bridges to gold and mineral fields and water supply. In addition, a sum of £2,591 was expended in loans under the Act of 1906, £27,099 on State Coal Mines, and £53,006 on State Smelting Works.

During the year the Chillagoe State Smelters produced 1,853 tons of lead bullion containing 511 ozs. of gold, 158,361 ozs. silver, and 1,808 tons of lead, in addition to 369 tons of blister copper containing 898 ozs. gold, 51,942 ozs. silver, and 356 tons copper. The State Arsenic Works at Jibbinbar produced 379 tons of high-grade arsenic. Four State batteries were in operation during 1924, the works at Irvinebank producing 169 tons of tin concentrates; 1,391 ozs. of gold were extracted by the battery at Kidston; at Charters Towers parcels of ore were treated for miners and prospectors; and at Bamford experimental work and a little tin crushing were done. The State Assay Office at Cloncurry made over 4,000 assays for the public during the year.

5. **South Australia.**—Aid is given to the mining industry under the terms of the Mining Act of 1893, and previous measures. Up to the end of 1924 the total amount of subsidy paid was £65,163, of which £13,227 has been repaid, and £2,250 written off, leaving a debit of £49,686. Portion of this amount is represented by machinery that has fallen into the hands of the Government. Repayments must be provided from profits, but in only two instances have the profits enabled a full return to be made. During the year 1924 assays and pan tests numbering 250 were made of small parcels of ore or tailings received from prospectors by State batteries and cyanide works.

6. **Western Australia.**—Under the Mining Development Act of 1902 assistance was granted in 1924 in accordance with the subjoined statement:—Advances in aid of mining work and equipment of mines with machinery, £23,457; aid to prospectors, £5,723; advances in aid of boring, £865; subsidies paid on stone crushed for the public, £174; making a total of £30,219. In addition, a sum of £68,349 was charged against the vote on account of rebates to the Gold-fields Water Supply Branch, and other assistance amounted to £2,908. The receipts under the Act, exclusive of interest payments, came to £2,819, of which £1,958 consisted of refunds of advances.

In 1924 there were 29 State batteries in operation. The amount expended thereon up to the end of 1924 was £91,981 from revenue and £309,605 from loan, giving a total of £401,586. During the year receipts amounted to £22,347, and working expenditure to £32,692. The total value of gold and tin recovered to the end of 1924 at the State plants was £5,862,551, resulting from the treatment of 1,402,000 tons of gold ore and 80,000 tons of tin ore, together with a small amount from residues.

7. **Tasmania.**—During the year 1924, the sum of £1,697 was expended in aid to mining including £475 for salaries, £111 for assay material, £618 assistance to prospectors, and advance of £300 to the Z.L. Prospecting Syndicate. The receipts amounted to £897, of which £670 represented royalty by tributers.

Tributers' assays are made at a nominal charge, and all tribute surveys are carried out free of charge by the Assay and Survey Office at Zeehan. The amount received from ore sales was £6,145, of which £5,424 was paid to tributers, £51 royalty to lessees, and £670 royalty to the State.

8. **Northern Territory.**—During the year 1923–24, with the exception of a subsidy to the Golden Dyke Company amounting to £350 on a £ for £ basis, and the loan of horses and equipment to reliable miners and prospectors, the little assistance rendered was by the Primary Producers Board, and amounted to about £700, of which £460 is recoverable.

The Government maintains a battery at Marranboy, and the Government Assayer makes free assays for prospectors, and arranges for the sampling, storage, and sale of ores.

§ 17. Commonwealth Government Control of Industrial Metals.

The proclamation under the Customs Act prohibiting the exportation of metals without the consent of the Minister for Trade and Customs is still in force, but consent is granted in every case where the contract relating to the sale of the metals has been approved.

§ 18. Metallic Contents of Ores, etc., Produced and Exported.

1. **Local Production.**—According to returns compiled from various sources by the Australiam Mines and Metals Association the quantities of the principal metals (exclusive of gold) extracted in Australia during the five years 1921 to 1925 were as follows :—

REFINED METALS PRODUCED IN AUSTRALIA, 1921 TO 1925.

Metal.		1921.	1922.	1923.	1924.	1925.
Silver	ozs.	4,572,878	7,896,052	7,645,689	7,631,213	8,573,506
Lead, pig ..	tons	55,749	105,528	118,513	126,625	146,129
Zinc	tons	1,681	23,724	41,153	46,372	45,698
Copper	tons	18,600	11,524	17,825	14,100	10,984
Tin	tons	2,985	2,657	3,053	3,167	3,171

The local production of pig iron during the last five years ranged between 84,000 tons in 1922, and 439,000 tons in 1925.

2. **Metallic Contents of Ores, Concentrates, etc., Exported.**—The estimated metallic contents of ores, concentrates, etc., exported during the five years 1921 to 1925 are given in the following table :—

METALLIC CONTENTS OF ORES, CONCENTRATES, ETC., EXPORTED, 1921 TO 1925.

Metal.		Contained in—	1921.	1922.	1923.	1924.	1925.
Silver	ozs.	Lead—Silver—Gold Bullion	64,811	165,290	283,453	158,361	189,223
		Lead Concentrates and Ores	210,944	281,728	1,298,750	90,360	850,552
		Zinc Concentrates and Ores	456,317	3,390,964	3,526,774	1,941,507	1,270,166
		Copper Ores	..	12,261	1,378	51,942	..
		Total	732,072	3,850,243	5,110,355	2,242,170	2,309,941
Lead	tons	Lead—Silver—Gold Bullion	580	1,790	3,564	1,808	2,751
		Lead Concentrates and Ores	3,950	2,959	18,572	4,852	19,651
		Zinc Concentrates and Ores	2,498	19,910	425	19,859	12,423
		Total	7,028	24,659	22,561	26,519	34,825
Zinc	tons	Lead Concentrates and Ores	435	..	..	384	366
		Zinc Concentrates and Ores	19,181	135,690	146,693	122,305	79,996
		Total	19,616	135,690	146,693	122,689	80,362
Copper	tons	Ores, Matte, etc. ..	34	326	2,182	875	864
Tin	tons	Concentrates and Ores ..	5	..	..	4	..

§ 19. Oversea Exports of Ores, Metals, etc.

The following table shows the quantity and value of the principal oversea exports of ores, concentrates, and metals, the produce of Australia, together with the countries to which the respective products were forwarded, for the year 1924–25 :—

OVERSEA EXPORTS OF AUSTRALIAN ORES, METALS, ETC., 1924-25.

Article.	Total Exports.	Exports to— United Kingdom.	United States.	Belgium.	Germany.	Japan.	New Zealand.	Other Countries.
QUANTITY.								
Ores—	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.
Alunite	1,140	1,140	..	..	..	..	..	..
Antimony ..	12,106	10,597	..	1,509	..	..	..	..
Cobalt	15,482	14,881	600	..	..	..	..	(b) 1
Silver and Silver-lead	164,910	1,906	..	106,111	56,893	..	..	..
Concentrates—								
Silver and Silver-lead	362,616	..	..	237,307	125,309	..	..	..
Zinc	4,489,005	1,748,907	..	2,206,286	99,466	..	..	(a)434,346
Cadmium—Blocks, Ingots, etc... ..	3,479	2,098	..	..	86	..	..	(c)1,295
Copper—								
Matte	8,026	..	..	..	8,026	..	..	..
Ingot	67,893	57,913	..	..	..	..	541	(d)9,439
Tin—Ingot ..	32,558	15,100	10,670	..	200	..	4,844	(h)1,744
Lead—								
Matte	43,922	43,922	..	..	..	..	..	..
Pig	2,311,153	1,880,119	..	710	60,044	235,158	45,345	(e)89,777
Zinc—Bars, Blocks, etc.	646,860	194,036	..	26,004	110,013	297,963	341	(g)18,503
	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.
Platinum, Osmium, etc.	1,407	852	505	..	..	..	..	(f)50
Gold—								
Matte	584	584	..	..	..	..	..	..
Bar, Dust, etc. ..	37,167	823	..	..	..	..	240	(i)36,104
Silver—								
Matte	158,662	158,662	..	..	..	..	..	..
Bar, Ingot, &c. ..	7,289,290	1,704	..	..	..	..	..	(j)7,287,586
VALUE—£.								
Ores—								
Alunite	228	228	..	..	..	..	..	..
Antimony ..	15,868	14,370	..	1,498	..	..	..	..
Cobalt	40,108	39,498	600	..	..	..	..	(b)10
Silver and Silver-lead	201,950	982	..	124,736	76,232	..	..	..
Concentrates—								
Silver and Silver-lead	345,132	..	..	235,681	109,451	..	..	..
Zinc	1,050,386	400,045	..	510,822	39,205	..	..	(a)100,314
Cadmium—Blocks, Ingots, etc... ..	41,617	26,561	..	..	900	..	..	(c)14,156
Copper—								
Matte	12,910	..	..	..	12,910	..	..	..
Ingot	222,708	192,566	..	..	..	..	2,072	(d)28,070
Tin—Ingot ..	406,000	189,098	132,167	..	2,600	..	60,204	(h)21,931
Lead—								
Matte	73,351	73,351	..	..	..	..	..	..
Pig	4,081,097	3,313,227	..	110	121,500	404,146	81,474	(e)160,640
Zinc—Bars, Blocks, etc.	1,146,261	347,950	..	45,500	194,000	527,055	714	(g)31,042
Platinum, Osmium, etc.	23,406	4,852	16,430	..	..	..	..	(f)2,124
Gold—								
Matte	2,562	2,562	..	..	..	..	..	..
Bar, Dust, etc. ..	157,233	3,620	..	..	..	..	1,020	(i)152,593
Silver—								
Matte	23,007	23,007	..	..	..	..	..	..
Bar, Ingot, etc ..	1,084,825	246	..	..	..	..	..	(j)1,084,579

(a) France, 434,346 cwts., £100,314. (b) New Zealand. (c) France, 980 cwts., £10,353 ; and small quantities to Japan and Norway and Sweden. (d) India, 5,439 cwts., £14,170 ; Sweden, 4,000 cwts., £13,900. (e) China 47,773 cwts., £84,512 ; Hong Kong, 35,813 cwts., £65,424 ; South Africa, 6,019 cwts., £10,322 ; and small quantities to Pacific Islands. (f) France. (g) France, 10,000 cwts., £16,000 ; Italy, 6,000 cwts., £10,500 ; China, 2,498 cwts., £4,530 ; and small quantities to Pacific Islands. (h) France, 1,700 cwts., £21,303 ; and small quantities to Pacific Islands. (i) Ceylon and India. (j) Ceylon, 84,740 ozs., £11,234 ; India, 6,773,576 ozs., £1,002,880 ; Fiji, 4,550 ozs., £781 ; China, 424,720 ozs., £69,684.

CHAPTER XXII.

MANUFACTURING INDUSTRY.

[NOTE.]—For the year 1920-21 the Queensland, Western Australian and Tasmanian year ended 31st December, 1920, and that of the three remaining States ended 30th June, six months later. In 1923-24 Tasmania adopted the year ended 30th June, and Queensland fell into line during 1924-25, while Western Australia proposes to make the change in 1925-26.

In all tables relating to employees—except where specially mentioned—" Number of Employees " includes working proprietors.

§ 1. Number and Classification of Factories.

1. **General.**—The number of factories in each State does not necessarily furnish an accurate indication of the extent or progress of manufacturing throughout Australia. since the larger establishments in many cases tend to absorb smaller enterprises, while on the other hand new factories are constantly springing up, and small plants are as numerous as large ones.

2. **Number of Factories in each State, 1920–21 to 1924–25.**—The following table gives the number of factories in each State for the years 1920-21 to 1924-25 :—

FACTORIES.—NUMBER IN EACH STATE, 1920–21 TO 1924–25.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1920–21 ..	5,837	6,532	1,795	1,438	895	616	17,113
1921–22 ..	6,356	6,753	1,810	1,432	986	686	18,023
1922–23 ..	6,702	7,096	1,878	1,609	1,199	689	19,173
1923–24 ..	7,321	7,289	1,912	1,698	1,188	781	20,189
1924–25 ..	7,906	7,425	1,890	1,711	1,188	675	20,795

(*a*) See general note above.

3. **Classification of Factories, Australia, 1920–21 to 1924–25.**—The following table shows the number of factories in Australia for each year from 1920–21 to 1924–25 classified in the groups agreed upon by the Conferences of Statisticians in 1902 and 1906. Details in regard to some of the principal industries in these groups will be found in § 9 hereinafter :—

FACTORIES.—CLASSIFICATION, AUSTRALIA, 1920–21 TO 1924–25.

Class of Industry.	1920–21. (*a*)	1921–22. (*a*)	1922–23. (*a*)	1923–24. (*a*)	1924–25. (*a*)
	No.	No.	No.	No.	No.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	772	762	810	799	780
II. Treating oils and fats, animal, vegetable, etc...	92	99	97	99	98
III. Processes in stone, clay, glass, etc.	707	736	782	845	871
IV. Working in wood	2,053	2,103	2,236	2,497	2,507
V. Metal Works, machinery, etc.	2,133	2,181	2,349	2,575	2,600
VI. Connected with food and drink, etc. ..	2,453	2,539	2,635	2,702	2,756
VII. Clothing and textile fabrics, etc.	3,499	3,893	4,225	4,408	4,616
VIII. Books, paper, printing and engraving ..	1,259	1,313	1,347	1,423	1,477
IX. Musical instruments, etc.	43	45	59	50	55
X. Arms and explosives	17	17	14	15	13
XI. Vehicles and fittings, saddlery and harness, etc.	1,634	1,778	1,913	2,189	2,338
XII. Ship and boat building and repairing ..	79	81	81	88	87
XIII. Furniture, bedding, and upholstery	916	927	1,010	1,160	1,192
XIV. Drugs, chemicals, and by-products	305	313	327	323	340
XV. Surgical and other scientific instruments ..	73	77	81	84	92
XVI. Jewellery, timepieces, and plated ware ..	233	247	254	258	262
XVII. Heat, light, and power	529	563	590	435	448
XVIII. Leatherware, n.e.i.	101	115	118	126	121
XIX. Minor wares, n.e.i.	215	234	245	113	142
Total	17,113	18,023	19,173	20,189	20,795

(*a*) See general note above.

For the purpose of the returns in the above table the definition of a factory adopted at the Conference of Statisticians in 1902 is used, viz., " Any factory, workshop or mill where four or more persons are employed or power is used."

The expansion in the number of factories in Australia has been particularly marked during recent years. Approximately 1,000 additional establishments have been added to the total number in each of the past four years. As previously pointed out, however, any increase or decrease in the number of factories from year to year does not necessarily indicate a change in the position of the industry.

4. **Classification of Factories, States, 1924–25.**—The following table shows the number of factories in each State during 1924–25 classified according to the nature of the industry :—

FACTORIES.—CLASSIFICATION, STATES, 1924–25.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Aust.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	260	272	43	96	51	58	780
II. Treating oils and fats, animal, vegetable, etc.	42	27	12	11	4	2	98
III. Processes in stone, clay, glass, etc.	387	261	41	105	57	20	871
IV. Working in wood	976	704	340	140	167	180	2,507
V. Metal works, machinery, etc. ..	968	1,012	190	245	140	45	2,600
VI. Connected with food and drink, etc.	948	721	480	272	224	111	2,756
VII. Clothing and textile fabrics, etc.	1,748	2,000	274	326	178	90	4,616
VIII. Books, paper, printing, and engraving	581	545	137	102	91	21	1,477
IX. Musical instruments, etc. ..	27	20	1	5	2	..	55
X. Arms and explosives	3	9	..	1	..	..	13
XI. Vehicles and fittings, saddlery and harness, etc.	935	844	160	203	131	65	2,338
XII. Ship and boat building and repairing	48	11	9	10	4	5	87
XIII. Furniture, bedding and upholstery	420	467	109	96	59	41	1,192
XIV. Drugs, chemicals, and by-products	144	142	6	19	17	12	340
XV. Surgical and other scientific instruments	30	37	11	8	6	..	92
XVI. Jewellery, timepieces and plated ware	93	111	16	24	10	8	262
XVII. Heat, light, and power ..	188	138	44	30	34	14	448
XVIII. Leatherware, n.e.i.	42	59	9	6	3	2	121
XIX. Minor wares, n.e.i.	66	45	8	12	10	1	142
Total	7,906	7,425	1,890	1,711	1,188	675	20,795

(*a*) Year ended 31st December, 1924.

§ 2. Classification of Factories according to Number of Employees.

1. **States, 1924–25.**—A more satisfactory method of measuring the importance of the manufacturing industry in Australia may, perhaps, be obtained by grouping the factories according to the average number of employees therein.

The following table shows, for each State, the number of factories classified according to the number of hands employed, and the average number of hands employed therein, during 1924–25 :—

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, 1924–25.

No. of Persons Employed in each Factory.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tasmania.	Australia.
			NUMBER OF FACTORIES.				
Under 4 ..	2,081	1,787	350	294	287	146	4,945
4 ..	767	764	142	143	128	92	2,036
5 to 10 ..	2,360	2,259	558	612	378	245	6,412
11 to 20 ..	1,196	1,169	369	290	173	82	3,279
21 to 50 ..	938	902	273	227	133	73	2,546
51 to 100 ..	303	312	90	97	56	24	882
Over 100 ..	261	232	108	48	33	13	695
Total ..	7,906	7,425	1,890	1,711	1,188	675	20,795

(*a*) Year ended 31st December, 1924.

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, 1924–25—*continued.*

AVERAGE NUMBER OF HANDS EMPLOYED.

No. of Persons Employed in each Factory.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tasmania.	Australia.
Under 4 ..	4,293	3,872	780	691	597	306	10,539
4 ..	3,068	3,056	568	572	512	368	8,144
5 to 10 ..	16,241	15,706	3,985	4,239	2,615	1,714	44,500
11 to 20 ..	17,369	17,068	5,368	4,119	2,566	1,211	47,701
21 to 50 ..	30,060	28,661	8,787	7,080	4,326	2,323	81,237
51 to 100 ..	20,450	21,960	6,104	6,587	3,826	1,609	60,536
Over 100 ..	74,279	63,835	23,330	15,065	7,316	3,467	187,292
Total ..	165,760	154,158	48,922	38,353	21,758	10,998	439,949

(*a*) Year ended 31st December, 1924.

2. **Australia, 1920–21 to 1924–25.**—For the period covered in the following table the number of factories has increased at a faster rate than that of employees, consequently a reduction has occurred in the average number of employees per factory. The same reason may be assigned for the decrease in the proportionate number of hands employed in the larger establishments, which dropped from 42.92 per cent. of the total employment in 1920–21 to 42.57 per cent. in 1924–25.

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, AUSTRALIA, 1920–21 TO 1924–25.

Year.(*a*)	Establishments Employing on the Average—							
	20 hands and under.		20 to 100 hands.		101 hands and upwards.		Total.	
	Establishments.	Hands.	Establishments.	Hands.	Establishments.	Hands.	Establishments.	Hands.
1920–21—								
Number	13,396	96,379	3,066	124,307	651	165,953	17,113	386,639
Average per establishment	..	7.19	..	40.54	..	254.92	..	22.59
Percentage on total ..	78.28	24.93	17.92	32.15	3.80	42.92	100.00	100.00
1921–22—								
Number	14,211	100,301	3,163	127,692	649	167,432	18,023	395,425
Average per establishment	..	7.06	..	40.37	..	257.98	..	21.94
Percentage on total ..	78.86	25.37	17.54	32.29	3.60	42.34	100.00	100.00
1922–23—								
Number	15,176	104,545	3,337	137,998	660	169,867	19,173	412,410
Average per establishment	..	6.89	..	41.35	..	257.37	..	21.51
Percentage on total ..	79.15	25.35	17.41	33.46	3.44	41.19	100.00	100.00
1923–24—								
Number	16,086	109,673	3,421	141,549	682	178,768	20,189	429,990
Average per establishment	..	6.82	..	41.38	..	262.12	..	21.30
Percentage on total ..	79.68	25.51	16.94	32.92	3.38	41.57	100.00	100.00
1924–25—								
Number	16,672	110,884	3,428	141,773	695	187,292	20,795	439,949
Average per establishment	..	6.65	..	41.36	..	269.48	..	21.16
Percentage on total ..	80.17	25.20	16.49	32.23	3.34	42.57	100.00	100 00

(*a*) See general note on first page of this Chapter.

§ 3. Power used in Factories.

1. **States, 1924–25.**—The following table shows the number of factories using steam, gas, oil, electricity, or water, and the horse-power of engines or motors during 1924–25 :—

FACTORIES.—HORSE-POWER OF ENGINES USED, 1924–25.

State.	Number of Establishments.			Actual Horse-power of Engines Used.					
	Using Machinery worked by Steam, Gas, Oil, Electricity, or Water.	Others.	Total.	Steam.	Gas.	Oil.	Electricity.	Water.	Total.
	No.	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
N.S.W. ..	6,976	930	7,906	251,042	14,817	3,539	154,849	682	424,929
Victoria ..	6,151	1,274	7,425	233,290	17,869	5,380	117,525	(a)	374,064
Queensland ..	1,581	309	1,890	92,633	13,401	1,639	27,891	26	135,590
S. Australia ..	1,423	288	1,711	87,940	8,353	4,067	28,818	14	129,192
W. Australia ..	995	193	1,188	44,886	5,252	1,952	18,060	..	70,150
Tasmania ..	591	84	675	5,684	288	655	47,238	72,286	126,151
Australia ..	17,717	3,078	20,795	715,475	59,980	17,232	394,381	73,008	1,260,076

(a) Statistics of Water Power not collected.

The utilization of mechanical power in factories is greatest in New South Wales where the largest number of industries requiring a considerable amount of power is located. Victoria, on the other hand, has the largest number of establishments, such as those connected with clothing and textile fabrics, wherein much less power is utilized.

The number of establishments in Australia during 1924–25 using steam, gas, oil, electricity, or water was 17,717 ; or 85.19 per cent. of the total ; 3,078 establishments, representing 14.81 per cent., used no mechanical power. The total actual horse-power in use was 1,260,076, distributed in the following proportions :—Steam, 56.78 per cent. ; gas, 4.76 per cent. ; oil, 1.37 per cent. ; electricity, 31.30 per cent. ; and water, 5.79 per cent.

2. **Australia, 1920–21 to 1924–25.**—The following table shows the horse-power of engines used in connexion with factories in Australia during each of the last five years :—

FACTORIES.—HORSE-POWER OF ENGINES USED, AUSTRALIA, 1920–21 TO 1924–25.

Year (a)	Number of Establishments.			Actual Horse-power of Engines Used.					
	Using Machinery worked by Steam, Gas, Oil, Electricity, or Water.	Others.	Total.	Steam.	Gas.	Oil.	Electricity.	Water.	Total.
	No.	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
1920–21 ..	13,943	3,170	17,113	437,851	59,365	11,884	217,916	15,465	742,481
1921–22 ..	14,859	3,164	18,023	460,258	57,877	10,363	249,379	20,216	798,093
1922–23 ..	15,951	3,222	19,173	475,917	59,702	12,240	283,850	35,732	867,441
1923–24 ..	17,056	3,133	20,189	633,683	60,237	16,277	344,085	56,492	1,110,774
1924 25 ..	17,717	3,078	20,795	715,475	59,980	17,232	394,381	73,008	1,260,076

(a) See general note on first page of this Chapter.

The growth of electrical power has been one of the chief factors in the rapid increase of mechanical power which has taken place in factories during recent years. From 72,250 horse-power in 1913, or roughly one-sixth of the total horse-power of engines used, it has increased to 394,381 horse-power, or one-third of the total installations in 1924–25. Steam power continues to expand with the development of the larger industries, but the increase in the use of gas and oil engines is negligible. During the past four years 129,399 horse-power has been added each year to the plant actually in use.

3. Classes of Industry, States, 1924–25.—The following table gives a classification of the actual horse-power of engines used in factories of different descriptions in each State during 1924–25 :—

FACTORIES.—HORSE-POWER OF ENGINES USED IN EACH CLASS, 1924–25.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	8,932	9,584	1,300	2,033	799	577	23,225
II. Treating oils and fats, animal, vegetable, etc. ..	2,164	1,066	835	507	94	18	4,684
III. Processes in stone, clay, glass, etc.	26,791	14,955	3,268	5,146	2,893	2,079	55,132
IV. Working in wood	24,653	19,693	11,670	3,480	9,937	3,502	72,935
V. Metal works, machinery, etc.	77,916	23,284	11,143	13,147	5,591	36,720	167,801
VI. Connected with food and drink, etc.	44,702	42,916	48,844	10,792	9,056	3,884	160,194
VII. Clothing and textile fabrics, etc.	10,600	20,089	2,584	1,384	573	1,408	36,638
VIII. Books, paper, printing, and engraving	12,491	9,655	1,984	1,851	1,275	444	27,700
IX. Musical instruments, etc. ..	817	356	..	17	2	..	1,192
X. Arms and explosives ..	673	664	..	2	..	..	1,339
XI. Vehicles and fittings, saddlery and harness, etc. ..	4,319	3,157	849	3,990	529	240	13,084
XII. Ship and boat building and repairing	9,333	1,383	87	915	30	27	11,775
XIII. Furniture, bedding, and upholstery	4,336	3,638	1,494	1,434	762	420	12,084
XIV. Drugs, chemicals, and by-products	4,027	4,165	168	4,203	1,398	205	14,166
XV. Surgical and other scientific instruments	105	95	53	20	17	..	290
XVI. Jewellery, timepieces, and plated ware	495	581	49	85	26	15	1,251
XVII. Heat, light, and power ..	190,255	211,424	51,145	80,148	37,047	76,586	646,605
XVIII. Leatherware, n.e.i. ..	205	513	33	5	48	1	805
XIX. Minor wares, n.e.i. ..	2,115	6,846	84	33	73	25	9,176
Total	424,929	374,064	135,590	129,192	70,150	126,151	1,260,076

(*a*) Year ended 31st December, 1924.

4. Classes of Industry, Australia, 1920–21 to 1924–25.—The following table shows a similar classification of the actual horse-power of engines used in manufacturing industries in Australia during the years 1920–21 to 1924–25 inclusive :—

FACTORIES.—HORSE-POWER OF ENGINES USED, AUSTRALIA, 1920–21 TO 1924–25.

Class of Industry.	1920–21. (*a*)	1921–22. (*a*)	1922–23. (*a*)	1923–24. (*a*)	1924–25. (*a*)
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	22,475	23,439	23,976	24,319	23,225
II. Treating oils and fats, animal, vegetable, etc.	3,098	3,062	3,421	3,848	4,684
III. Processes in stone, clay, glass, etc.	38,290	41,031	42,787	48,614	55,132
IV. Working in wood	60,363	58,677	60,343	68,234	72,935
V. Metal works, machinery, etc.	122,744	135,690	140,009	162,153	167,801
VI. Connected with food and drink, etc. ..	124,550	136,773	147,160	159,982	160,194
VII. Clothing and textile fabrics, etc.	24,342	28,451	30,382	35,295	36,638
VIII. Books, paper, printing, and engraving ..	18,201	21,392	21,812	26,569	27,700
IX. Musical instruments, etc.	704	590	888	1,116	1,192
X. Arms and explosives	1,446	1,691	809	1,236	1,339
XI. Vehicles and fittings, saddlery and harness, etc.	6,410	6,990	8,361	11,454	13,084
XII. Ship and boat building and repairing ..	10,076	11,879	11,406	11,247	11,775
XIII. Furniture, bedding, and upholstery	8,227	8,923	9,995	11,338	12,084
XIV. Drugs, chemicals, and by-products	10,332	11,386	11,309	12,378	14,166
XV. Surgical and other scientific instruments ..	156	179	209	218	290
XVI. Jewellery, timepieces, and plated wire ..	885	945	1,066	1,120	1,251
XVII. Heat, light, and power	280,589	297,409	344,373	522,621	646,605
XVIII. Leatherware, n.e.i.	616	651	708	760	805
XIX. Minor wares, n.e.i.	8,977	8,935	8,427	8,272	9,176
Total	742,481	798,093	867,441	1,110,774	1,260,076

(*a*) See general note on first page of this Chapter.

The actual horse-power of engines used increased in every branch of industry except two, viz., Class I. Treating Raw Materials, and Class X. Arms and Explosives, during the last four years. The industries using the greatest amount of power were Class XVII. Heat, light, and power; Class V. Metal works, machinery, etc.; and Class VI. Connected with food and drink. These three classes, which together accounted for 85.28 per cent. of the total power used in 1924–25 increased their horse-power from 527,883 to 1,074,600 during the four years under review, and are mainly responsible for the development of mechanical power in factories since 1920–21.

§ 4. Employment in Factories.

1. **Total Number Employed.**—Each person employed in and about a factory, in whatever capacity, is now included as a factory employee, consequently every proprietor who works in his own business is counted as an employee, and all "outworkers" (see sub-section 5 (ii) hereinafter) are also included. The individuals embraced may be classed under the following heads:—(i) Working proprietors; (ii) managers and overseers; (iii) accountants and clerks; (iv) engine-drivers and firemen; (v) skilled and unskilled workers in the factories, mills, or workshops; (vi) carters and messengers; and (vii) others.

The following table shows, for each year from 1920–21 to 1924–25 inclusive, (*a*) the average numbers of persons (including both sexes and all ages) employed in manufacturing industries in each State: (*b*) the percentage of the numbers employed in each State on the total numbers employed in Australia; and (*c*) the numbers employed per ten thousand of the mean population in each State and Australia:—

FACTORIES.—EMPLOYMENT, 1920–21 TO 1924–25.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
AVERAGE NUMBER.							
1920–21 ..	145,011	140,743	43,196	30,430	17,034	10,225	386,639
1921–22 ..	148,876	144,876	42,248	31,171	18,127	10,127	395,425
1922–23 ..	152,266	152,625	43,403	34,695	19,097	10,324	412,410
1923–24 ..	159,674	156,162	44,948	37,275	19,712	12,219	429,990
1924–25 ..	165,760	154,158	48,922	38,353	21,758	10,998	439,949
PERCENTAGE ON AUSTRALIAN TOTAL.							
	%	%	%	%	%	%	%
1920–21 ..	37.51	36.40	11.17	7.87	4.41	2.64	100.00
1921–22 ..	37.65	36.64	10.69	7.88	4.58	2.56	100.00
1922–23 ..	36.92	37.01	10.53	8.41	4.63	2.50	100.00
1923–24 ..	37.13	36.32	10.45	8.67	4.59	2.84	100.00
1924–25 ..	37.68	35.04	11.12	8.72	4.94	2.50	100.00
PER 10,000 OF MEAN POPULATION.							
1920–21 ..	693	921	578	620	517	486	715
1921–22 ..	699	934	553	620	544	475	719
1922–23 ..	701	960	556	676	562	481	734
1923–24 ..	723	961	554	710	566	557	748
1924–25 ..	735	930	586	712	598	505	749

(*a*) See general note on first page of this Chapter.

2. Rates of Increase, 1919–1920 to 1924–25.—The following table shows the percentage of increase or decrease on the average number of persons employed for the preceding year in each of the years from 1919–20 to 1924–25.

FACTORY EMPLOYEES.—PERCENTAGE OF INCREASE, 1919–20 TO 1924–25.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	%	%	%	%	%	%	%
1919–20—1920–21..	0.39	3.39	5.64	0.36	10.55	2.09	2.63
1920–21—1921–22..	2.67	2.94	−2.20	2.44	6.42	−0.96	2.27
1921–22—1922–23..	2.28	5.35	2.73	11.31	5.35	1.95	4.30
1922–23—1923–24..	4.87	2.32	3.56	7.44	3.22	18.36	4.26
1923–24—1924–25..	3.81	−1.28	8.84	2.89	10.38	−10.00	2.32

NOTE.—The minus sign indicates decrease.

(*a*) See general note on first page of this Chapter.

3. Employees in Classes of Industry, Australia, 1920–21 to 1924–25.—The following table gives the average numbers of persons employed in factories under each group in Australia during the years 1920–21 to 1924–25 inclusive :—

FACTORY EMPLOYEES.—CLASSES, AUSTRALIA, 1920–21 TO 1924–25.

Class of Industry.	1920–21. (*a*)	1921–22. (*a*)	1922–23. (*a*)	1923–24. (*a*)	1924–25. (*a*)
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	10,494	10,925	11,394	10,842	10,289
II. Treating oils and fats, animal, vegetable, etc...	2,848	3,103	3,173	3,424	3,342
III. Processes in stone, clay, glass, etc.	18,311	16,974	18,666	20,256	20,342
IV. Working in wood	31,942	32,393	33,102	36,319	36,252
V. Metal works, machinery, etc.	80,550	76,798	78,614	88,213	90,888
VI. Connected with food and drink, etc. ..	57,599	59,252	60,888	61,550	64.712
VII. Clothing and textile fabrics, etc.	88,577	97,194	102,451	100,850	100,830
VIII. Books, paper, printing and engraving ..	27,522	28,673	31,015	32,659	33,043
IX. Musical instruments, etc.	1,065	1,154	1,415	1,357	1,441
X. Arms and explosives	1,504	1,372	433	803	819
XI. Vehicles and fittings, saddlery and harness, etc.	16,334	16,808	19,532	22,490	24,234
XII. Ship and boat building and repairing ..	6,702	7,035	6,053	5,794	6,230
XIII. Furniture, bedding, and upholstery	11,827	11,475	12,608	15,230	15,697
XIV. Drugs, chemicals, and by-products	6,805	6,933	6,884	7,215	7,511
XV. Surgical and other scientific instruments ..	548	570	582	608	690
XVI. Jewellery, timepieces, and plated ware ..	2,707	2,503	2,489	2,447	2,365
XVII. Heat, light, and power	12,770	13,431	14.112	12,967	13,735
XVIII. Leatherware, n.e.i.	2,191	2,414	2,476	2,576	2,506
XIX. Minor wares, n.e.i.	6,343	6,418	6,523	4,390	5,023
Total	386,639	395,425	412,410	429,990	439,949

(*a*) See general note on first page of this Chapter.

On the average during each of the last four years employment has been found for 13,328 additional persons in the manufacturing industries. The classes responsible for the bulk of the increase were Class VII. Clothing and Textile Fabrics, Class V. Metal Works, Class XI. Vehicles etc., and Class VI. Food and Drink, in several of the principal industries of which classes considerable development has occurred during the period.

4. Employees in Classes of Industry, States, 1924–25.—The following table gives a classification of employees in manufacturing industries in each State during 1924–25 :—

FACTORY EMPLOYEES.—CLASSES, STATES, 1924–25.

Class of Industry.	N.S.W.	Vic.	Q'land.	S.A.	W.A. (a)	Tas.	Australia.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	3,812	4,066	703	814	436	458	10,289
II. Treating oils and fats, animal, vegetable, etc.	1,726	950	245	291	84	46	8,342
III. Processes in stone, clay, glass, etc.	9,491	6,181	1,012	2,159	1,031	468	20,342
IV. Working in wood	10,330	10,161	5,675	2,021	5,975	2,090	36,252
V. Metal works, machinery, etc. ..	41,914	25,427	7,817	9,938	3,825	1,967	90,888
VI. Connected with food and drink, etc.	20,087	19,344	16,176	4,428	2,794	1,883	64,712
VII. Clothing and textile fabrics, etc. ..	33,270	49,633	7,296	5,773	3,034	1,824	100,830
VIII. Books, paper, printing and engraving	12,904	11,595	3,865	2,491	1,476	712	33,043
IX. Musical instruments, etc. ..	881	467	11	63	19	..	1,441
X. Arms and explosives	388	428	..	3	..	..	819
XI. Vehicles and fittings, saddlery, and harness, etc.	8,162	6,957	2,236	5,131	1,173	575	24.234
XII. Ship and boat building and repairing	5,083	432	89	578	14	34	6,230
XIII. Furniture, bedding, and upholstery	5,951	5,312	1,708	1,494	852	380	15,697
XIV Drugs, chemicals, and by-products	2,998	2,882	129	946	488	68	7,511
XV. Surgical and other scientific instruments	275	236	93	52	34	..	690
XVI. Jewellery, timepieces, and plated ware	873	1,069	129	194	75	25	2,365
XVII. Heat, light, and power	4,389	5,423	1,353	1,779	340	451	13,735
XVIII. Leatherware, n.e.i.	1,178	940	180	142	55	11	2,506
XIX. Minor wares, n.e.i. .. .	2,048	2,655	205	56	53	6	5,023
Total	165,760	154,158	48,922	38,353	21,758	10,998	439,949

(a) Year ended 31st December, 1924.

The largest number employed in any particular class in Australia during 1924–25 was in class VII., in which there were 100,830 employees, or 22.92 per cent. of the total in all classes. The class affording employment to the smallest number of hands was Class XV., in which there were 690 hands, or 0.16 per cent, of the total. Classes VI., VII., and VIII. include those industries in which female labour is largely employed. (See § 5, 5 hereof.)

5. Employees According to Nature of Employment.—(i) *General.* In the following table the average numbers of persons employed in each State during 1924–25 are classified according to the nature of their employment :—

FACTORY EMPLOYEES.—NATURE OF EMPLOYMENT, 1924–25.

State.	Average Number of Persons Employed.						
	Working Proprietors.	Managers and Overseers.	Accountants and Clerks.	Engine-drivers and Firemen.	Workers, Skilled & Unskilled, in Factory Mill or Workshop. (a)	Carters, Messengers and Others.	Total.
New South Wales ..	6,732	5,876	8,301	3,292	139,275	2,284	165,760
Victoria	7,255	5,043	6,827	2,142	129,434	3,457	154,158
Queensland ..	1,342	1,798	2,635	2,060	37,855	3,232	48,922
South Australia ..	1,407	1,378	2,329	545	31,960	734	38,353
Western Australia	701	984	1,008	552	16,845	1,668	21,758
Tasmania ..	470	449	731	317	8,814	217	10,998
Australia ..	17,907	15,528	21,831	8,908	364,183	11,592	439,949

(a) Including Outworkers.

(ii) *Outworkers.* The term " outworker " or " homeworker " has acquired a special meaning in connexion with manufacturing industries, and technically embraces only those to whom work is given out by factory owners to be wrought upon in the employees' own homes. Individuals working for themselves are not included. The following table gives particulars of the average number of outworkers connected with factories in each State during each year from 1920–21 to 1924–25 inclusive :—

FACTORIES.—OUTWORKERS(*a*), 1920–21 TO 1924–25.

Year.(*b*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1920–1921 ..	471	1,151	41	68	14	45	1,790
1921–1922 ..	618	1,476	26	59	8	48	2,235
1922–1923 ..	547	1,228	33	84	8	32	1,932
1923–1924 ..	470	870	38	35	9	41	1,463
1924–1925 ..	461	728	32	62	4	19	1,306

(*a*) In all tables relating to number of hands employed in factories, outworkers are included.
(*b*) See general note on first page of this Chapter.

The Factories Acts in each State contain provisions regulating the employment of outworkers. Records of outwork, specifying the names and remuneration of workers, and stating the places where the work is done, must be kept by factory proprietors. Fuller information regarding the operation of the Factories Acts will be found in Official Year Book No. 16, pp. 540 to 566.

§ 5. Sex Distribution in Factories.

1. Employment of Females.—In all the States the employment of female labour in factories is regulated by Acts of Parliament. More extended reference to this matter will be found in Official Year Book No. 16, pp. 540 to 566.

2. Distribution of Employees according to Sex.—(i) *General.* In New South Wales the ratio of the number of females employed in factories to the number of males during 1886 was about one to seven ; in 1891 one to six ; in 1903 it became about one to four ; and is now less than one to three. In Victoria the ratio of females to males during the year 1886 was about one to five. Five years later (1891) it was somewhat less, but in 1896 had increased to about one woman to three men, and at present is nearly one to two. In South Australia the ratio at the latest date was one female employed to every four males, and in the remaining States about one to five. The ratio for Australia was one to three. The employment of women is, however, mainly confined to a few trades.

Increasing activity in the clothing and textile industries is the principal cause of the growth in female employment. Certain occupations are regarded as specially suitable for women, such as clothing and textile manufacture, preparation of food, book-binding, and wrapping and packing connected with various industries. In common also with commercial establishments, a considerable number of factories employ women as clerks and typists.

(ii) *Average Number of Males and Females Employed, 1920–21 to 1924–25.* The following table shows the average number of male and female employees in factories in each State from 1920–21 to 1924–25 :—

FACTORIES.—MALES AND FEMALES EMPLOYED, 1920–21 TO 1924–25.

State.	1920–21.(*a*)	1921–22.(*a*)	1922–23.(*a*)	1923–24.(*a*)	1924–25.(*a*)
		MALES.			
New South Wales ..	112,187	112,362	114,970	121,845	126,496
Victoria	96,379	97,789	103,092	107,578	105,984
Queensland	36,011	35,050	35,528	36,788	40,895
South Australia	24,548	25,006	27,988	30,261	31,238
Western Australia ..	14,329	15,514	15,851	16,439	18,316
Tasmania	8,746	8,525	8,453	10,046	9,016
Australia	292,200	294,246	305,882	322,957	331,945
		FEMALES.			
New South Wales ..	32,824	36,514	37,296	37,829	39,264
Victoria	44,364	47,087	49,533	48,584	48,174
Queensland	7,185	7,198	7,875	8,160	8,027
South Australia	5,882	6,165	6,707	7,014	7,115
Western Australia ..	2,705	2,613	3,246	3,273	3,442
Tasmania	1,479	1,602	1,871	2,173	1,982
Australia	94,439	101,179	106,528	107,033	108,004

(*a*) See general note on first page of this Chapter.

During the years specified in the above table there has been an increase in the number of male factory employees in Australia of 39,745, or an annual average of 9,936, whilst the number of female employees increased by 13,565, or an annual average of 3,391.

(iii) *Average Number of Males and Females Employed per 10,000 of Mean Population, 1920–21 to 1924–25.* The following table shows the average number of male and female employees per 10,000 of the mean male and female population respectively in each State from 1920–21 to 1924–25 :—

MALE AND FEMALE FACTORY EMPLOYEES PER 10,000 OF MEAN MALE AND FEMALE POPULATION RESPECTIVELY, 1920–21 TO 1924–25.

State.	1920–21.(*a*)	1921–22.(*a*)	1922–23.(*a*)	1923–24.(*a*)	1924–25.(*a*)
		MALES.			
New South Wales ..	1,051	1,037	1,038	1,081	1,099
Victoria	1,279	1,279	1,307	1,333	1,286
Queensland	910	869	862	868	929
South Australia	1,001	992	1,087	1,140	1,141
Western Australia ..	814	875	876	883	938
Tasmania	821	792	782	917	830
Australia	1,063	1,053	1,070	1,105	1,108

(*a*) See general note on first page of this Chapter.

MALE AND FEMALE FACTORY EMPLOYEES PER 10,000 OF MEAN MALE AND FEMALE POPULATION RESPECTIVELY—*continued.*

State.	1920–21.(*a*)	1921–22.(*a*)	1922–23.(*a*)	1923–24.(*a*)	1924–25.(*a*)
			FEMALES.		
New South Wales ..	321	350	350	350	356
Victoria	573	599	618	593	578
Queensland	204	199	213	215	203
South Australia	239	246	262	274	269
Western Australia ..	176	168	205	202	204
Tasmania	142	152	175	198	181
Australia	356	374	386	380	375

(*a*) See general note on first page of this Chapter.

3. **Rate of Variation for each Sex.**—The percentages of annual increase or decrease during the years 1920–21 to 1924–25 in the average number of males and females employed in factories are shown below :—

PERCENTAGES OF ANNUAL INCREASE, MALE AND FEMALE FACTORY EMPLOYEES, 1920–21 TO 1924–25.

State.	1919–20—1920–21.(*a*)	1920–21—1921–22.(*a*)	1921–22—1922–23.(*a*)	1922–23—1923–24.(*a*)	1923–24—1924–25.(*a*)
			MALES.		
	%	%	%	%	%
New South Wales ..	2.14	0.16	2.31	5.91	3.82
Victoria	4.64	1.46	5.42	4.35	−1.48
Queensland	6.38	−2.67	1.36	3.54	11.16
South Australia	4.75	1.87	11.93	8.12	3.23
Western Australia ..	12.04	8.27	2.17	3.71	11.42
Tasmania	2.86	−2.53	−0.84	18.84	−10.26
Total	4.17	0.70	3.95	5.58	2.78
			FEMALES.		
New South Wales ..	−5.18	11.24	2.14	1.43	3.79
Victoria	−0.13	6.14	5.19	−1.92	−0.84
Queensland	2.06	0.18	9.41	3.62	−1.63
South Australia	−2.10	4.81	8.79	4.58	1.43
Western Australia ..	3.24	3.40	24.23	0.83	5.16
Tasmania	−2.25	8.32	16.79	16.14	−8.79
Total	−1.85	7.14	5.29	0.47	0.91

NOTE.—The minus sign indicates decrease.

(*a*) See general note on first page of this Chapter.

4. **Masculinity of Employees in Factories.**—The extent to which females are employed in the factories of Australia may perhaps be more clearly shown by giving the masculinity of employees for each State for a series of years. The following table furnishes particulars for each of the years 1920–21 to 1924–25 inclusive :—

MASCULINITY (*b*) OF FACTORY EMPLOYEES, 1920–21 TO 1924–25.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1920–21	54.7	37.0	66.7	61.3	68.2	71.1	51.1
1921–22	51.0	35.0	65.9	60.4	71.2	68.4	48.8
1922–23	51.0	35.1	63.7	61.3	66.0	63.8	48.3
1923–24	52.6	37.8	63.7	62.4	66.8	62.0	50.2
1924–25	52.6	37.5	67.2	62.9	68.4	64.0	50.9

(*a*) See general note on first page of this Chapter.
(*b*) Excess of males over females per 100 of both sexes combined.

The ratio of the sexes employed in factories in Australia has remained fairly constant during recent years, with a tendency towards increased masculinity in the latest two years. Fluctuations have, however, taken place in several of the States, the masculinity increasing in Victoria, Queensland, South Australia and Western Australia, and decreasing in New South Wales and Tasmania. The tables given in the succeeding sub-section show that the comparatively high proportions of females have been due not so much to the incursion of female labour into what may be termed men's trades, as to the activity in those trades in which women are ordinarily engaged, more especially in dressmaking, millinery, etc.

5. **Employment of Females in Particular Industries.**—The employment of women in manufacturing industries in Australia is mainly confined to a few trades, of which the more important are comprised in Classes VI., VII., and VIII., viz., in connexion with food, drink, etc., clothing and textile fabrics, and books, paper, printing, etc. The following tables show the average number of females employed in each of these classes in each State during 1924–25 and the percentages of the average number so employed on the total average number of females employed in all classes of factories :—

FEMALES EMPLOYED IN PARTICULAR INDUSTRIES, AND PERCENTAGES ON AVERAGE TOTAL EMPLOYED, 1924–25.

Class.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
AVERAGE NUMBER.							
VI. Food, drink, etc.	6,261	5,169	994	912	512	494	14,342
VII. Clothing and textile fabrics ..	23,269	34,899	5,301	4,241	2,249	1,200	71,159
VIII. Books, paper, printing, etc. ..	3,693	3,282	894	773	326	141	9,114
All other classes	6,041	4,824	838	1,189	355	147	13,389
Total	39,264	48,174	8,027	7,115	3,442	1,982	108,004
PERCENTAGES ON AVERAGE TOTAL FEMALE EMPLOYEES.							
VI. Food, drink, etc.	15.95	10.73	12.38	12.82	14.88	24.92	13.28
VII. Clothing and textile fabrics ..	59.26	72.44	66.04	59.61	65.34	60.54	65.88
VIII. Books, paper, printing, etc. ..	9.40	6.81	11.14	10.86	9.47	7.12	8.44
All other classes	15.39	10.02	10.44	16.71	10.31	7.42	12.40
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(*a*) Year ended 31st December, 1924.

The largest proportion of females is engaged in one or other of the three classes of industry indicated, Class VII. being the most important. The classification of the employment of females in the several industries in that class, and the relation of their number to that of the males so employed, are shown in the following table :—

FEMALES EMPLOYED IN EACH INDUSTRY IN CLASS VII. DURING 1924-25.

Industry.	New South Wales.			Victoria.			Other States.		
	Males.	Females	Femininity. (a)	Males.	Females	Femininity. (a)	Males.	Females	Femininity. (a)
Woollen and tweed mills	695	1,090	22.13	2,224	2,853	12.39	453	626	16.03
Knitting factories ..	489	2,034	61.23	648	3,779	69.16	27	220	78.14
Cotton mills ..	231	253	4.54	..	..	..	75	3	-92.31
Boots and shoes ..	4,022	2,142	-30.50	6,947	5,152	-14.84	1,853	1,104	-29.57
Clothing (tailoring and slop)	2,536	8,479	53.95	2,221	7,632	54.92	1,805	5,927	53.31
Clothing (waterproof and oilskin) ..	15	91	71.70	73	188	84.43	..	..	..
Dressmaking and millinery	120	3,630	93.60	423	7,916	92.06	32	2,702	97.66
Dyeworks and cleaning	242	167	-18.34	127	133	2.31	112	134	8.94
Furriers	205	270	13.68	197	406	34.66	40	91	38.93
Hats and caps ..	548	1,040	30.98	692	1,004	44.06	63	81	12.50
Shirts, ties, and scarves	349	3,532	82.01	442	5,237	70.73	136	1,873	86.46
Rope and cordage ..	258	79	-53.12	501	390	-12.46	183	39	-64.86
Tents and tarpaulins	142	146	1.39	134	102	-13.56	104	74	-16.30
Bags and sacks ..	149	316	35.91	105	107	0.94	53	117	37.65
Total, Class VII. ..	10,001	23,269	39.88	14,734	34,899	40.63	4,936	12,991	44.93

NOTE.—The minus sign denotes excess of males over females.

(a) Excess of females over males per 100 of both sexes combined.

§ 6. Child Labour in Factories.

1. **Conditions of Child Labour.**—The employment of young persons in factories in each State of Australia is regulated by Acts of Parliament, as is the case with the employment of female labour. Reference to the legislation regarding the employment of child labour in factories will be found in Official Year Book No. 16, pp. 540 to 566. The general object of the restrictions imposed is to assure that a proper period shall be devoted to primary education, and that the early years of toil shall not exhaust the worker before the attainment of full growth.

2. **Average Number of Children Employed, 1920-21 to 1924-25.**—In the statistical compilations of the various States the term " child " may be taken to denote any person

under sixteen years of age. The following table shows the average number of children of each sex employed in manufacturing industries in each State during the years 1920–21 to 1924–25 :—

CHILDREN EMPLOYED IN FACTORIES, 1920–21 TO 1924–25.

State.	1920–21.(*a*)	1921–22.(*a*)	1922–23.(*a*)	1923–24.(*a*)	1924–25.(*a*)
MALES.					
New South Wales	3,673	3,911	3,995	4,128	3,968
Victoria	3,715	3,780	4,031	4,057	4,027
Queensland	1,266	1,077	1,119	1,236	1,507
South Australia	991	996	1,125	1,199	1,080
Western Australia	448	401	452	530	552
Tasmania	315	287	282	360	238
Australia	10,408	10,452	11,004	11,510	11,372
FEMALES.					
New South Wales	3,610	4,150	4,288	4,038	4,256
Victoria	2,798	3,120	3,163	3,422	3,223
Queensland	738	774	969	972	979
South Australia	679	714	795	773	839
Western Australia	311	235	251	200	254
Tasmania	193	135	266	294	190
Australia	8,329	9,128	9,732	9,699	9,741
TOTAL.					
New South Wales	7,283	8,061	8,283	8,166	8,224
Victoria	6,513	6,900	7,194	7,479	7,250
Queensland	2,004	1,851	2,088	2,208	2,486
South Australia	1,670	1,710	1,920	1,972	1,919
Western Australia	759	636	703	730	806
Tasmania	508	422	548	654	428
Australia	18,737	19,580	20,736	21,209	21,113

(*a*) See general note on first page of this Chapter.

3. Percentage of Children on Total Number of Employees.—The foregoing table shows a general increase in the number of children employed in factories during the past four years. This increase is greater among the females than is the case with the males, the respective gains being 1,412 and 964. Examined in conjunction with the total number of persons employed the percentage of children has decreased since 1920–21.

PERCENTAGE OF CHILDREN ON TOTAL NUMBER OF FACTORY EMPLOYEES, 1920–21 TO 1924–25.

State.	1920–21.(*a*)	1921–22.(*a*)	1922–23.(*a*)	1923–24.(*a*)	1924–25.(*a*)
	%	%	%	%	%
New South Wales ..	5.02	5.41	5.44	5.11	4.96
Victoria	4.63	4.76	4.71	4.79	4.70
Queensland	4.64	4.38	4.81	4.91	5.08
South Australia	5.49	5.49	5.53	5.29	5.00
Western Australia ..	4.46	3.51	3.68	3.70	3.70
Tasmania	4.97	4.17	5.31	5.35	3.89
Australia	4.85	4.95	5.03	4.93	4.80

(*a*) See general note on first page of this Chapter.

4. **Industries Employing Child Labour.**—The employment of children is largely confined to a limited number of industries, the most important of which are specified in the next table, which shows the average number of children of each sex employed during 1924–25 in the several industries indicated.

CHILDREN EMPLOYED.—VARIOUS INDUSTRIES, 1924–25.

Class.	Industry.	N.S.W.		Victoria.		Q'land.		S. Aust.		W. Aust. (*a*)		Tas.		Australia.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
II.	Soap and candles ..	49	31	18	21	13	2	9	18	6	1	..	..	95	73
III.	Bricks, tiles, pottery, and earthenware ..	165	11	58	2	20	..	25	..	14	7	4	..	286	20
IV.	Joinery, boxes, cases, etc.	88	3	150	3	32	1	36	1	22	1	6	..	334	9
,,	Saw mills	50	2	12	..	103	3	17	3	27	..	23	..	232	8
V.	Agricultural implements	20	..	89	7	3	..	39	1	4	..	..	..	155	8
,,	Engineering, ironworks, and foundries ..	327	23	506	4	83	..	127	9	70	..	3	..	1,116	36
,,	Galvanized ironworking and tinsmithing	139	40	180	22	67	3	37	1	..	..	1	..	424	66
,,	Railway carriage, railway and tramway workshops ..	66	..	173	..	24	..	21	..	3	..	..	..	287	..
,,	Wire working ..	115	2	19	1	9	..	6	2	5	..	..	..	154	5
VI.	Meat and fish preserving	..	..	13	1	135	6	..	..	1	..	..	..	149	6
,,	Biscuits	233	212	108	90	12	22	17	15	38	14	..	..	408	353
,,	Confectionery ..	77	221	30	60	29	37	7	55	3	15	51	45	197	433
,,	Jams, pickles, sauces, etc.	26	12	44	10	14	16	16	25	1	8	10	6	111	77
,,	Condiments, coffee, spices, etc. ..	34	49	7	23	..	..	54	11	12	1	..	..	107	84
,,	Tobacco, cigars, etc.	56	109	81	33	..	..	..	2	6	10	..	..	143	154
VII.	Woollen and tweed mills	86	154	200	262	6	17	6	9	..	..	26	51	324	493
,,	Boots and shoes ..	155	247	319	479	46	84	36	45	35	17	17	18	608	890
,,	Clothing (tailoring and slop)	81	772	76	377	54	298	30	152	9	53	15	14	265	1,666
,,	Dressmaking and millinery	9	430	15	555	..	96	..	126	1	46	1	27	26	1,280
,,	Shirts, ties, scarves, etc.	19	455	21	330	7	142	2	67	..	23	1	12	50	1,029
,,	Hats and caps ..	38	142	48	33	..	8	3	6	..	..	..	..	89	189
,,	Knitting factories ..	33	282	25	337	..	12	1	25	..	5	..	4	59	665
,,	Rope and cordage ..	11	28	70	32	15	1	3	..	8	2	..	..	107	63
VIII.	Printing and binding	390	257	331	76	234	103	99	66	72	21	18	7	1,144	530
,,	Paper making, paper boxes, etc. ..	92	207	98	117	7	35	19	99	2	12	..	..	218	470
XI.	Coach and wagon building	35	2	67	1	23	..	13	..	12	..	6	..	156	3
,,	Cycles and motors ..	234	12	211	..	107	4	164	4	48	1	17	..	781	21
XIII.	Billiard tables, cabinet making and furniture	113	7	166	4	69	2	69	2	30	..	8	..	455	15
,,	Bedding, flock, and upholstery ..	52	36	40	24	8	2	13	3	3	..	2	1	118	66
XIV.	Chemicals, drugs, and medicines ..	39	83	19	48	..	8	3	16	7	6	2	..	70	161
XVIII.	Leather belting, etc...	77	81	34	30	13	11	10	35	..	..	1	1	135	158

(*a*) Year ended 31st December, 1924.

5. **Apprenticeship.**—In all the States Acts are in force for the regulation of the age at which children may be employed in gainful occupations. Legislative provision is also made for the regulation of apprenticeship under the various State Factories Acts or Arbitration Acts. These Acts, while laying down general principles, leave to the wages tribunals the actual determination of the conditions under which apprentices may be employed.

§ 7. Salaries and Wages Paid and Value of Production.

[NOTE.]—In all tables relating to Salaries and Wages paid in Factories the amounts given are exclusive of all sums drawn by working proprietors.

1. **General.**—The importance of the manufacturing industries of Australia is indicated by the fact that the total value of the output for 1924–25 was £380,843,986, of which amount the sum of £221,993,978 represents the value of the raw materials used, and £11,713,250 the value of the fuel and light used. The difference between the sum of the two latter amounts and the value of the output, viz., £147,136,758, represents the amount by which the value of the raw materials was enhanced in the process of manufacture. The total amount of salaries and wages paid in factories during 1924–25 was £81,360,021.

2 **Salaries and Wages Paid.**—(i) *Total Amount, 1924–25.* The total amount of salaries and wages paid during the year 1924–25 in various classes of factories in Australia is shown in the following table :—

SALARIES AND WAGES PAID IN FACTORIES, 1924–25.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	724,150	810,507	118,655	142,566	61,081	31,496	1,888,455
II. Treating oils and fats, animal, vegetable, etc. ..	315,612	195,772	48,556	51,705	18,676	7,678	637,999
III. Processes in stone, clay, glass, etc. ..	2,058,986	1,359,389	184,169	456,961	194,230	96,856	4,350,591
IV. Working in wood ..	1,976,956	2,065,041	1,058,878	405,677	1,345,090	331,611	7,183,253
V. Metal works, machinery, etc. ..	9,582,173	5,321,302	1,666,462	2,182,746	780,708	472,457	20,005,848
VI. Connected with food and drink, etc. ..	3,721,700	3,779,328	3,446,134	798,805	515,945	314,861	12,576,773
VII. Clothing and textile fabrics, etc. ..	4,170,403	6,375,886	835,191	653,401	337,573	201,185	12,573,639
VIII. Books, paper, printing, and engraving	2,471,130	2,262,649	783,400	435,490	308,745	154,404	6,415,818
IX. Musical instruments, etc.	202,165	104,273	1,856	7,585	3,244	..	319,123
X. Arms and explosives	100,142	89,274	..	549	..	..	189,965
XI. Vehicles and fittings, saddlery and harness, etc. ..	1,460,028	1,228,762	350,410	948,439	192,556	93,940	4,274,135
XII. Ship and boat building and repairing	1,255,922	103,674	11,026	120,140	3,245	4,959	1,498,966
XIII. Furniture, bedding, and upholstery ..	1,029,304	900,163	293,345	243,038	154,128	56,848	2,676,826
XIV. Drugs, chemicals, and by-products	594,270	574,060	17,390	190,393	97,838	9,635	1,483,586
XV. Surgical and other scientific instruments	46,949	40,620	16,144	9,445	4,649	..	117,807
XVI. Jewellery, timepieces, and plated ware	167,033	199,488	22,153	34,897	12,438	2,936	438,945
XVII. Heat, light & power	1,130,520	1,376,178	332,699	449,132	83,944	107,436	3,479,909
XVIII. Leatherware, n.e.i.	173,274	139,015	22,888	12,100	7,973	1,030	356,280
XIX. Minor wares, n.e.i.	340,132	518,760	19,098	7,589	5,776	748	892,103
Total ..	31,520,849	27,444,141	9,228,454	7,150,658	4,127,839	1,888,080	81,360,021

(a) Year ended 31st December, 1924.

The maximum amount of salaries and wages paid in any particular class during 1924–25 was in Class V., the amount being £20,005,848 ; or 24.59 per cent. on the total amount ; the minimum amount was in Class XV., £117,807, or 0.14 per cent. on the total. The State in which the largest amount was paid was New South Wales.

(ii) *Totals and Averages, 1920–21 to 1924–25.* The following statement shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, during each of the years 1920–21 to 1924–25. The figures are exclusive of working proprietors and of the amounts drawn from the business by them :—

SALARIES AND WAGES PAID IN FACTORIES.—TOTAL AND AVERAGE PER ANNUM PER EMPLOYEE, 1920–21 TO 1924–25.

Year. (*a*)	Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
		£	£	£	£	£	£	£
1920–21	Total amount paid ..	25,618,591	21,377,216	6,718,905	4,866,211	2,870,567	1,480,228	62,931,718
	Average per employee	182.39	159.41	161.12	166.96	173.60	150.86	169.28
1921–22	Total amount paid ..	26,783,242	23,846,495	7,217,773	5,313,927	3,386,550	1,502,874	68,050,861
	Average per employee	186.21	172.84	177.12	177.76	191.94	156.93	179.24
1922–23	Total amount paid ..	27,050,730	25,547,192	7,447,959	5,943,745	3,500,625	1,642,901	71,133,152
	Average per employee	184.44	175.79	178.16	178.83	189.32	167.23	179.92
1923–24	Total amount paid ..	29,772,994	27,472,084	7,764,929	6,727,398	3,640,959	1,899,901	77,278,265
	Average per employee	194.08	184.80	179.21	188.17	190.22	163.60	187.61
1924–25	Total amount paid ..	31,520,849	27,444,141	9,228,454	7,150,658	4,127,839	1,888,080	81,360,021
	Average per employee	198.21	186.81	193.96	193.54	196.03	179.34	192.78

(*a*) See general note on first page of this Chapter.

In comparing the figures in the preceding table, regard should be paid to the nature of certain industries which are carried on to a greater extent in some States than in others. In Victoria, for instance, there is a large number of hands employed in Class VII., comprising a heavy percentage of women and children. The highest average wage per employee in 1924–25 was paid in New South Wales, where the percentage of industries requiring highly skilled labour is largest.

The salaries and wages paid in factories have advanced considerably during recent years in consequence of the rapid rise in the cost of living. During the past four years the average wage increased by £23.50 or 13.88 per cent., while the additional outlay for wage increases amounted in the aggregate to £10,000,000.

(iii) *Earnings of Males and Females, 1924–25.* The following table shows the approximate amount paid in salaries and wages to males and females in each class of industry in each State during the year 1924–25 :—

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES, 1924–25.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
MALES.							
	£	£	£	£	£	£	£
I. Treating raw material product of agricultural and pastoral pursuits, etc. ..	700,995	805,704	117,998	141,275	60,782	31,374	1,858,128
II. Treating oils and fats, animal, vegetable, etc. ..	274,646	178,380	45,749	47,574	18,018	6,763	571,130
III. Processes in stone, clay, glass, etc. ..	2,042,764	1,341,040	182,141	454,685	189,614	96,574	4,306,818
IV. Working in wood ..	1,956,032	2,047,602	1,047,147	399,855	1,343,350	330,813	7,124,799
V. Metal works, machinery, etc. ..	9,451,979	5,248,402	1,654,712	2,164,178	776,400	467,850	19,763,521

(*a*) Year ended 31st December, 1924.

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES, 1924–25—*continued.*

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
MALES—*continued.*							
	£	£	£	£	£	£	£
VI. Connected with food and drink, etc. ..	3,138,866	3,218,624	3,361,541	720,560	478,189	272,730	11,190,510
VII. Clothing and textile fabrics, etc. ..	1,883,636	2,870,862	372,038	259,794	131,574	111,810	5,629,714
VIII. Books, paper, printing, and engraving	2,109,705	1,910,622	697,347	374,923	274,362	139,694	5,506,653
IX. Musical instruments, etc.	188,919	101,940	1,770	7,380	3,088	..	303,097
X. Arms and explosives	99,249	72,371	..	549	..	..	172,169
XI. Vehicles and fittings, saddlery and harness, etc. ..	1,425,550	1,210,239	333,918	907,166	187,547	90,501	4,154,921
XII. Ship and boat building and repairing	1,249,208	103,275	11,026	120,140	3,245	4,959	1,491,853
XIII. Furniture, bedding, and upholstery ..	952,898	835,785	278,637	233,539	147,038	53,887	2,501,784
XIV. Drugs, chemicals, and by-products	499,898	494,146	11,264	177,195	93,380	8,907	1,284,790
XV. Surgical and other scientific instruments	42,851	38,801	15,153	8,616	4,217	..	109,638
XVI. Jewellery, timepieces, and plated ware	157,312	187,475	21,081	33,452	12,162	2,936	414,418
XVII. Heat, light, & power	1.120,288	1,301,531	326,783	438,576	83,775	106,200	3,377,153
XVIII. Leatherware, n.e.i.	130,729	106,321	17,430	7,792	6,243	887	269,402
XIX. Minor wares, n.e.i.	245,418	442,441	12,528	7,221	4,946	748	713,302
Total ..	27,670,943	22,515,561	8,508,263	6,504,470	3,817,930	1,726,633	70,743,800
FEMALES.							
I. Treating raw material product of agricultural and pastoral pursuits, etc. ..	23,155	4,803	657	1,291	299	122	30,327
II. Treating oils and fats, animal, vegetable, etc. ..	40,966	17,392	2,807	4,131	658	915	66,869
III. Processes in stone, clay, glass, etc. ..	16,222	18,349	2,028	2,276	4,616	282	43,773
IV. Working in wood ..	20,924	17,439	11,731	5,822	1,740	798	58,454
V. Metal works, machinery, etc. ..	130,194	72,900	11,750	18,568	4,308	4,607	242,327
VI. Connected with food and drink, etc. ..	582,834	560,704	84,593	78,245	37,756	42,131	1,386.263
VII. Clothing and textile fabrics, etc. ..	2,286,767	3,505,024	463,153	393,607	205,999	89,375	6,943,925
VIII. Books, paper, printing, and engraving	361,425	352,027	86,053	60,567	34,383	14,710	909,165
IX. Musical instruments, etc.	13,246	2,333	86	205	156	..	16,026
X. Arms and explosives	893	16,903	..	..	..	..	17,796
XI. Vehicles and fittings, saddlery and harness, etc. ..	34,478	18,523	16,492	41,273	5,009	3,439	119,214
XII. Ship and boat building and repairing	6,714	399	..	..	..	..	7,113
XIII. Furniture, bedding, and upholstery ..	76,406	64,378	14,708	9,499	7,090	2,961	175,042
XIV. Drugs, chemicals, and by-products	94,372	79,914	6,126	13,198	4,458	728	198.796
XV. Surgical and other scientific instruments	4,098	1,819	991	829	432	..	8,169
XVI. Jewellery, timepieces, and plated ware	9,721	12,013	1,072	1,445	276	..	24,527
XVII. Heat, light, & power	10,232	74,647	5,916	10,556	169	1,236	102,756
XVIII. Leatherware, n.e.i.	42,545	32,694	5,458	4,308	1,730	143	86,878
XIX. Minor wares, n.e.i.	94,714	76,319	6,570	368	830	..	178,801
Total ..	3,849,906	4,928,580	720,191	646,188	309,909	161,447	10,616,221

(*a*) Year ended 31st December, 1924.

(iv) *Total and Average Earnings of Males and Females, 1920–21 to 1924–25.* Similar information for the last five years is given in the table hereunder :—

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES, 1920–21 TO 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Males.							
1920–21.*a* Amount paid .. £	22,766,216	17,668,917	6,168,744	4,430,269	2,647,957	1,376,822	55,058,925
Per cent. on total ..	88.87	82.65	91.81	91.04	92.25	93.01	87 49
Average per employee £	210.99	195.63	178.49	190.05	191.16	165.07	197.85
1921–22.*a* Amount paid .. £	23,466,566	19,497,451	6,596,101	4,827,612	3,155,091	1,388,741	58,931,562
Per cent. on total ..	87.62	81.76	91.39	90.85	93.17	92.41	86.60
Average per employee £	218.03	213.07	196.28	203.02	209.65	173.57	210.79
1922–23.*a* Amount paid .. £	23,456,421	20,799,146	6,781,882	5,392,340	3,217,347	1,499,750	61,146,886
Per cent. on total ..	86.71	81.41	91.06	90.72	91.91	91.29	85.96
Average per employee £	213.83	215.56	199.57	202.85	210.53	187.99	210.84
1923–24.*a* Amount paid .. £	26,166,890	22,581,677	7,058,196	6,115,958	3,345,430	1,739,153	67.007,304
Per cent. on total ..	87.89	82.20	90.90	90.91	91.88	91.54	86.71
Average per employee £	225.71	224.08	200.39	212.48	210.39	183.75	218.93
1924–25.*a* Amount paid .. £	27,670,943	22,515,561	8,508,263	6,504,470	3,817,930	1,726,633	70,743,800
Per cent. on total ..	87.78	82.04	92.20	90.96	92.49	91.45	86.95
Average per employee £	230.29	220.49	214.83	217.70	216.26	201.69	224.41
Females.							
1920–21.*a* Amount paid .. £	2,852,375	3,708,299	550,161	435,942	222,610	103,406	7,872,793
Per cent. on total ..	11.13	17.35	8.19	8.96	7.75	6.99	12.51
Average per employee £	87.61	84.71	77.04	74.71	82.94	70.30	84.23
1921–22.*a* Amount paid .. £	3,316,676	4,349,044	621,672	486,315	231,459	114,133	9,119.299
Per cent. on total ..	12.38	18.24	8.61	9.15	6.83	7.59	13.40
Average per employee £	91.62	93.60	87.01	79.54	89.19	72.42	91.11
1922–23.*a* Amount paid .. £	3.594,309	4,748,046	666,077	551,405	283,278	143,151	9,986.266
Per cent. on total ..	13.29	18.59	8.94	9.28	8.09	8.71	14.04
Average per employee £	97.23	97.21	85.13	82.87	88.30	75.55	94.80
1923–24.*a* Amount paid .. £	3,606,104	4,890,407	706,733	611,440	295,529	160,748	10,270,961
Per cent. on total ..	12.11	17.80	9.10	9 09	8.12	8.46	13.29
Average per employee £	96.22	102.12	87.20	87.75	91.21	74.83	97.05
1924–25.*a* Amount paid .. £	3,849,906	4,928,580	720,191	646,188	309,909	161,447	10,616,221
Per cent. on total ..	12.22	17.96	7.80	9.04	7.51	8.55	13.05
Average per employee £	100.20	103.74	90.30	91.42	91.07	82.08	99.41

(*a*) See general note on first page of this Chapter.

(v) *Managers, Overseers, and Other Employees.* A further analysis of salaries and wages paid is given in the following table, the amounts paid to managers, overseers, etc., being differentiated from those paid to other employees. As previously mentioned, amounts drawn by working proprietors are excluded in all cases.

SALARIES AND WAGES.—MANAGERS, OVERSEERS, AND OTHER FACTORY EMPLOYEES, AUSTRALIA, 1924–25.

Class of Industry.	Salaries and Wages Paid to—						
	Managers, Overseers, Accountants, and Clerks.		All other Employees.		All Employees.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
	£	£	£	£	£	£	£
I. Treating raw material product of agricultural and pastoral pursuits, etc. ..	229,958	12,310	1,628,170	18,017	1,858,128	30,327	1,888,455
II. Treating oils and fats, animal, vegetable, etc.	123,687	21,671	447,443	45,198	571,130	66,869	637,999
III. Processes in stone, clay, glass, etc.	455,184	22,776	3,851,634	20,997	4,306,818	43,773	4,350.591
IV. Working in wood ..	745,783	46,354	6,379,016	12,100	7,124,799	58,454	7,183.253
V. Metal works, machinery, etc. ..	2,032,836	123,674	17,730,685	118,653	19,763,521	242,327	20,005,848
VI. Connected with food and drink, etc.	1,964,832	199,462	9,225,678	1,186,801	11,190,510	1,386,263	12,576,773
VII. Clothing and textile fabrics, etc. ..	984,676	372,611	4,645,038	6,571,314	5,629,714	6,943,925	12,573,639
VIII. Books, paper, printing and engraving ..	996,309	178,506	4,510,344	730,659	5,506,653	909,165	6,415,818
IX. Musical instruments, etc.	33,514	6,057	269,583	9,969	303,097	16,026	319,123
X. Arms and explosives	28,696	1,834	143,473	15,962	172,169	17,796	189,965

SALARIES AND WAGES.—MANAGERS, OVERSEERS, AND OTHER FACTORY EMPLOYEES, AUSTRALIA, 1924–25—*continued.*

Class of Industry.	Salaries and Wages Paid to—						
	Managers, Overseers, Accountants, and Clerks.		All Other Employees.		All Employees.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
	£	£	£	£	£	£	£
XI. Vehicles and fittings, saddlery and harness, etc. ..	482,924	76,036	3,671,997	43,178	4,154,921	119,214	4,274,135
XII. Ship and boat building and repairing..	161,234	5,547	1,330,619	1,566	1,491,853	7,113	1,498,966
XIII. Furniture, bedding, and upholstery ..	210,155	37,014	2,291,629	138,028	2,501,784	175,042	2,676,826
XIV. Drugs, chemicals, and by-products ..	297,902	46,857	986,888	151,939	1,284,790	198,796	1,483,586
XV. Surgical and other scientific instruments	17,021	2,793	92,617	5,376	109,638	8,169	117,807
XVI. Jewellery, timepieces, and plated ware ..	36,196	8,833	378,222	15,694	414,418	24,527	438,945
XVII. Heat, light, and power	698,983	49,347	2,678,170	53,409	3,377,153	102,756	3,479,909
XVIII. Leatherware, n.e.i. ..	40,930	8,239	228,472	78,639	269,402	86,878	356,280
XIX. Minor wares, n.e.i. ..	94,122	9,715	619,180	169,086	713,302	178,801	892,103
Total ..	9,634,942	1,229,636	61,108,858	9,386,585	70,743,800	10,616,221	81,360,021
Average paid per employee	340.04	136.26	212.99	96.01	224.41	99.41	192.78

3. **Value of Fuel and Light Used.**—(i) *Total Amount, 1924–25.* The expenditure in factories on fuel and light is of considerable importance; in 1924–25 it amounted to £11,713,250. The classes of industry in which fuel was most extensively used were Class V., Metal Works, Machinery, etc., £3,472,793; Class XVII., Heat, Light, Power, etc., £2,748,256, of which amount £2,408,753 was expended on generating electric light and power; Class VI., Connected with Food, Drink, etc., £2,040,674; and Class III., Stone, Clay, Glass, etc., £1,495,471. The following table shows the value of fuel and light used in the different classes of industry during 1924–25:—

VALUE OF FUEL AND LIGHT USED IN FACTORIES, 1924–25.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	117,061	108,709	17,129	18,913	6,454	2,242	270,508
II. Treating oils and fats, animal, vegetable, etc.	60,411	39,706	4,589	9,178	1,829	1,048	116,761
III. Processes in stone, clay, glass, etc. ..	686,891	452,766	37,288	208,461	59,509	50,556	1,495,471
IV. Working in wood ..	75,755	57,868	22,952	12,680	10,987	12,976	193,218
V. Metal works, machinery, etc.	2,315,832	304,487	73,932	377,675	47,804	353,063	3,472,793
VI. Connected with food and drink, etc. ..	673,319	656,848	423,642	164,216	79,215	43,434	2,040,674
VII. Clothing and textile fabrics, etc. ..	121,929	253,3 8	18,651	20,557	6,056	24,057	444,568
VIII. Books, paper, printing, and engraving ..	117,459	115,860	24,863	16,138	8,764	4,952	288,036
IX. Musical instruments, etc.	5,263	2,652	..	160	35	..	8,110
X. Arms and explosives	3,895	12,900	..	10	..	..	16,805
XI. Vehicles and fittings, saddlery and harness, etc. ..	47,453	41,274	6,981	31,918	7,044	3,082	137,752
XII. Ship and boat building and repairing ..	69,163	5,001	170	6,740	8	154	81,236
XIII. Furniture, bedding and upholstery ..	23,949	27,753	7,477	7,303	3,130	1,382	71,084
XIV. Drugs, chemicals, and by-products ..	64,387	71,960	2,031	32,891	11,136	716	183,121
XV. Surgical and other scientific instruments	1,441	1,179	560	513	182	..	3,875
XVI. Jewellery, timepieces, and platedware ..	5,759	7,554	603	1,820	358	176	16,270
XVII. Heat, light, and power	1,461,180	715,905	139,755	244,764	149,425	37,227	2,748,256
XVIII. Leatherware, n.e.i. ..	1,969	4,042	299	209	304	17	6,840
XIX. Minor wares, n.e.i. ..	30,378	84,853	1,462	666	513	..	117,872
Total	5,883,494	2,964,635	782,384	1,154,902	392,753	535,082	11,713,250

(*a*) Year ended 31st December, 1924.

(ii) *Total Amount, 1920–21 to 1924–25.* The following table gives the sums expended on fuel and light during the past five years :—

VALUE OF FUEL AND LIGHT USED IN FACTORIES, 1920–21 TO 1924–25.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
1920–21	3,608,744	2,184,096	766,590	704,775	273,061	155,222	7,692,488
1921–22	3,983,730	2,329,760	668,224	798,495	324,619	151,553	8,256,381
1922–23	4,021,068	2,443,681	690,656	948,455	361,990	193,765	8,659,615
1923–24	5,129,848	2,803,239	708,888	1,008,557	380,499	265,409	10,296,404
1924–25	5,883,494	2,964,635	782,384	1,154,902	392,753	535,082	11,713,250

(*a*) See general note on first page of this Chapter.

4. **Value of Raw Materials Used.**—(i) *Total Amount, 1924–25.* The value of raw materials worked up (i.e., exclusive of fuel, lubricants, etc.) in factories in Australia during 1924–25 was £221,993,978, which represents 58.29 per cent. of the total value of the final output. (See next sub-section.) The following table shows the value of the raw materials worked up in various classes of industry in each State :—

VALUE OF RAW MATERIALS USED IN FACTORIES, 1924–25.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	6,370,830	4,610,049	2,335,301	725,591	616,907	244,978	14,903,656
II. Treating oils and fats, animal, vegetable, etc.	1,915,261	1,146,909	156,291	246,080	86,990	30,213	3,581,744
III. Processes in stone, clay, glass, etc. ..	1,758,339	852,617	147,921	343,473	111,436	38,159	3,251,945
IV. Working in wood ..	4,925,714	2,515,981	1,895,917	1,427,483	395,321	224,125	11,384,541
V. Metal works, machinery, etc. ..	24,967,739	6,764,017	1,778,720	6,370,572	1,074,833	1,317,151	42,273,032
VI. Connected with food and drink, etc. ..	34,517,251	26,623,668	20,658,406	5,881,956	2,689,909	1,311,859	91,683,049
VII. Clothing and textile fabrics, etc. .	7,538,604	13,310,534	2,012,791	1,149,009	647,286	376,369	25,034,593
VIII. Books, paper, printing, and engraving	3,009,145	2,560,152	520,753	473,640	235,636	91,341	6,890,667
IX. Musical instruments, etc.	305,995	121,132	2,582	17,605	385	..	447,699
X. Arms and explosives	20,126	186,109	..	1,282	..	..	207,517
XI. Vehicles and fittings, saddlery and harness, etc. ..	1,326,139	1,062,177	480,423	1,401,121	380,257	56,142	4,706,259
XII. Ship and boat building and repairing..	584,620	28,123	13,468	145,644	2,160	3,862	777,877
XIII. Furniture, bedding, upholstery ..	1,823,821	1,406,183	431,329	324,247	190,417	52,227	4,228,224
XIV. Drugs, chemicals, and by-products ..	2,444,541	1,792,235	56,103	614,647	466,270	55,287	5,429,083
XV. Surgical and other scientific instruments	46,082	33,252	7,904	9,558	7,538	..	104,334
XVI. Jewellery, timepieces, and platedware ..	154,226	252,748	11,772	28,680	13,330	939	461,695
XVII. Heat, light, and power	1,931,138	1,406,379	151,241	199,888	52,093	87,641	3,828,380
XVIII. Leatherware, n.e.i. ..	342,335	330,785	36,722	32,496	17,484	1,207	761,029
XIX. Minor wares, n.e.i.	699,422	1,287,643	28,790	16,920	5,479	400	2,038,654
Total ..	94,681,328	66,290,693	30,726,434	19,409,892	6,993,731	3,891,900	221,993,978

(*a*) Year ended 31st December, 1924.

The largest value of raw materials used was in Class VI., "Connected with Food and Drink, etc." the total being £91,683,049. The next in order of importance was Class V., "Metal Works, Machinery, etc.," in which raw materials valued at £42,273,032 were used. The minimum value appears in Class XV., "Surgical and other Scientific Instruments," the total being only £104,334.

(ii) *Total Amount, 1920–21 to 1924–25.* The following table presents particulars of the values of raw materials used in factories during the past five years :—

VALUE OF RAW MATERIALS USED IN FACTORIES, 1920–21 TO 1924–25.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1920–21 ..	91,104,505	65,401,425	24,073,200	14,375,430	6,677,414	4,234,308	205,866,282
1921–22 ..	82,090.396	60,352,561	24,808,420	14,087.930	6,087,693	2,983,265	190,410,265
1922–23 ..	77,222,401	62,658,163	21,403,740	16,015,552	5,553,347	3,229,460	186,082,663
1923–24 ..	85,568,596	62,217,874	22.110,052	17,463,156	5,897,549	3,781,499	197,038,726
1924–25 ..	94,681,328	66,290,693	30,726,434	19,409,892	6,993,731	3,891,900	221,993,978

(*a*) See general note on first page of this Chapter.

5. **Total Value of Output.** (i) *Total, 1924–25.* The value of the output of new goods manufactured and of repairs effected in factories of various classes in each State during 1924–25 is shown in the following table. The figures given represent not only the increase in value due to the process of manufacture, but also include the value of the raw materials and the fuel and light used. The difference between the sum of the values of the materials and the fuel and light used and the total output (see sub-section 6 hereof) is the real value of production from manufactories.

TOTAL VALUE OF OUTPUT OF FACTORIES, 1924–25.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	7,698,337	6,254,372	2,483,348	981,408	767,964	311,115	18,496,544
II. Treating oils and fats, animal, vegetable, etc.	2,933,238	1,724,696	304,585	363,546	116,482	51,122	5,493,669
III. Processes in stone, clay, glass, etc.	6,064,262	3,726,707	670,228	1,313,265	466,457	256,169	12,497,088
IV. Working in wood ..	8,020,954	5,928,283	3,820.538	2,031,341	2,120,248	689,376	22,610,740
V. Metal works, machinery, etc.	42,494,404	14,903,234	4,282,891	9,869,486	2,100,060	2,600,697	76,250,772
VI. Connected with food and drink, etc.	45,732,840	36,560,899	28,207,722	7,734,066	4,032,723	1,949,776	124,218,026
VII. Clothing and textile fabrics, etc.	14,834,883	23,990,812	3,382,332	2,170,516	1,111,214	707,570	46,197,327
VIII. Books, paper, printing, and engraving ..	7,300,440	6,390,870	1,808,376	1,237,620	858,446	311,502	17,907,254
IX. Musical instruments, etc.	641,850	280,812	6,382	32.346	4,725	..	966,115
X. Arms and explosives ..	152,727	361,712	..	2,142	..	..	516,581
XI. Vehicles and fittings, saddlery and harness, etc.	3,563,375	3,044,934	1,682,180	2,780,246	681,924	193,372	11,946,031
XII. Ship and boat building and repairing ..	2,004,282	163,696	31,808	297,401	5,566	12,520	2,515,273
XIII. Furniture, bedding, and upholstery	3,475,812	2,913,265	870,427	723,379	386,764	142,053	8,511,700
XIV. Drugs, chemicals, and by-products	4,646,287	3,146,338	106,638	1,045,106	760,514	88,685	9,793,568
XV. Surgical and other scientific instruments	127,252	108,657	39,519	33,303	15,803	..	324,534
XVI. Jewellery, timepieces, and plated ware	419,938	600,070	48,579	87,240	29,840	6,172	1,191,839
XVII. Heat, light, and power ..	7,553,733	5,384,044	1,254,395	1,357,405	426,099	518,076	16,493,752
XVIII. Leatherware, n.e.i. ..	638,212	569,910	68,930	49,826	27,929	2,664	1,357,471
XIX. Minor wares, n.e.i. ..	1,306,047	2,124,087	73,558	34,351	16,024	1,635	3,555,702
Total	159,608,873	118,177,398	49,142,436	32,143,993	13,928,782	7,842,504	380,843,986

(*a*) Year ended 31st December, 1924.

New South Wales far exceeds the other States in respect of the total value of output, the value being £159,608,873, or 41.91 per cent. on the total for all States. Next in order of value is Victoria, which produced 31.03 per cent.; the value of the output of Queensland was 12.90 per cent.; of South Australia 8.44 per cent.; of Western Australia 3.66 per cent.; and of Tasmania 2.06 per cent. The two most important classes in order of value of output (Classes VI. and V.) are the same as in order of value of raw materials used.

(ii) *Totals and Averages, 1920–21 to 1924–25.* The following statement shows the value of output of factories, value per employee, and value per head of mean population in each State during the five years ended 1924–25 :—

TOTAL VALUE OF OUTPUT OF FACTORIES, 1920–21 TO 1924–25.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
				TOTAL.			
	£	£	£	£	£	£	£
1920 21 ..	137,841,386	106,008,294	39,190,242	22,358,109	11,443,080	7,151,972	323,993,083
1921–22 ..	132,820,065	106,243,181	40,334,298	23,854,857	11,291,739	5,796,625	320,340,765
1922 23 ..	132,735,140	111,286,343	37,824,101	26,903,775	11,321,551	6,426,226	326,497,136
1923–24 ..	146,359,260	113,921,927	38,867,603	29,650,995	11,976.310	7,801,488	348,577,583
1924–25 ..	159,608,873	118,177,398	49,142,436	32,143,993	13,928,782	7,842,504	380,843,986
				PER EMPLOYEE.			
	£	£	£	£	£	£	£
1920–21 ..	951	753	907	735	672	699	838
1921–22 ..	892	733	955	765	623	572	810
1922–23 ..	872	729	871	775	593	622	792
1923–24 ..	917	730	865	795	608	638	811
1924–25 ..	963	767	1,005	838	640	713	866
				PER HEAD OF MEAN POPULATION.			
	£	£	£	£	£	£	£
1920–21 ..	65.90	69.38	52.54	45.54	34.67	34.00	59.96
1921–22 ..	62.42	68.51	52 87	47.48	33.83	27.18	58.27
1922–23 ..	61.09	69.98	48.43	52.42	33.33	29.92	58.11
1923–24 ..	66.24	70.09	48.42	56.51	34.39	35.61	60.76
1924–25 ..	70.80	71.32	58.86	59.69	38.25	36.00	64.84

(*a*) See general note on first page of this Chapter.

6. Value added in Process of Manufacture.—(i) *Total in Classes, 1924–25.* The difference between the figures given in sub-section 5 and the sum of the corresponding figures in sub-sections 3 and 4 represents the amount added to the value of the raw materials by the process of manufacture. This is the real measure of the value of production of manufacturing industries. The following table shows the value added in this manner during 1924–25 in each State for the various classes of factories :—

VALUE ADDED IN PROCESS OF MANUFACTURE, 1924–25.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	1,210,446	1,535,614	130,918	236,904	144,603	63,895	3,322,380
II. Treating oils and fats, animal, vegetable, etc.	957,566	538,081	143,705	108,288	27,663	19,861	1,795,164
III. Processes in stone, clay, glass, etc. ..	3,619,032	2,421,324	485,019	761,331	295,512	167,454	7,749,672
IV. Working in wood ..	3,019,485	3,354,434	1,901,669	591,178	1,713,940	452,275	11,032.981
V. Metal works, machinery, etc.	15,210,833	7,834,730	2,430,239	3,121,239	977,423	930,483	30,504,947
VI. Connected with food and drink, etc. ..	10,542,270	9,280,383	7,125,674	1,687,894	1,263,599	594,483	30,494,303
VII. Clothing and textile fabrics, etc. ..	7,174,350	10,426,960	1,350,890	1,000,950	457,872	307,144	20,718,166
VIII. Books, paper, printing and engraving ..	4,173,836	3,714,858	1,262,760	747,842	614,046	215,209	10,728,551
IX. Musical instruments, etc.	330,592	157,028	3,800	14,581	4,305	..	510,306
X. Arms and explosives	128,706	162,703	..	850	..	..	292,259
XI. Vehicles and fittings, saddlery and harness etc.	2,189,783	1,941,483	1,194,776	1,347,207	294,623	134,148	7,102,020
XII. Ship and boat building and repairing ..	1,350,499	130,572	18,170	145,017	3,398	8,504	1,656,160
XIII. Furniture, bedding, and upholstery ..	1,628,042	1,479,329	431,621	391,739	193,217	88,444	4,212,392
XIV. Drugs, chemicals, and by-products ..	2,137,359	1,282,143	48,504	397,568	283,108	32,682	4,181,364
XV. Surgical & other scientific instruments ..	79,729	74,226	31,055	23,232	8,083	..	216,325
XVI. Jewellery, timepieces, and platedware ..	259,953	339,768	36,204	56,740	16,152	5,057	713,874
XVII. Heat, light and power	4,161,415	3,261,760	963,399	912,753	224.581	393,208	9,917,116
XVIII. Leatherware, n.e.i. ..	293,908	235,083	31,909	17,121	10,141	1,410	589,602
XIX. Minor wares, n.e.i. ..	576,247	751,591	43,306	16,765	10,032	1,235	1,399,176
Total ..	59,044,051	48,922,070	17,633,618	11,579,199	6,542,298	3,415,522	147,136,758

(a) Year ended 31st December, 1924.

(ii) *Totals and Averages, 1920–21 to 1924–25.* The amount of the value added is in much the same order as in the case of value of output, the six most important classes being V., VI., VII., IV., VIII. and XVII., in the order named. The value added to raw materials by process of manufacture and the amount per employee and per head of mean population are shown in the following table for the years 1920–21 to 1924–25 :—

FACTORIES.—VALUE ADDED IN PROCESS OF MANUFACTURE, 1920–21 TO 1924–25.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
VALUE.							
	£	£	£	£	£	£	£
1920–21 ..	43,128,137	38,422,773	14,350,452	7,277,904	4,492,605	2,762,442	110,434,313
1921–22 ..	46,745,939	43,560,860	14,857,654	8,968,432	4,879,427	2,661,807	121,674,119
1922–23 ..	51,491,671	46,184,499	15,729,705	9,939,768	5,406,214	3,003,001	131,754,858
1923–24 ..	55,660,816	48,900,814	16,048,663	11,179,282	5,698,262	3,754,580	141,242,417
1924–25 ..	59,044,051	48,922,070	17,633,618	11,579,199	6,542,298	3,415,522	147,136,758

(a) See general note on first page of this chapter.

FACTORIES—VALUE ADDED IN PROCESS OF MANUFACTURE, 1920–21 TO 1924–25—*continued.*

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
PER EMPLOYEE.							
	£	£	£	£	£	£	£
1920–21 ..	297	273	332	239	264	270	286
1921–22 ..	314	300	352	288	269	263	308
1922–23 ..	338	303	362	286	283	291	319
1923–24 ..	349	313	357	300	289	307	328
1924–25 ..	356	317	360	302	301	311	334
PER HEAD OF MEAN POPULATION.							
	£	£	£	£	£	£	£
1920–21 ..	20.62	25.15	19.24	14.82	13.61	13.13	20.44
1921–22 ..	21.97	28.09	19.47	17.85	14.62	12.48	22 13
1922–23 ..	23.70	29.00	20.14	19.37	15.92	13.98	23.45
1923–24 ..	25.19	30.09	19.99	21.30	16.36	17.14	24.62
1924–25 ..	26.19	29.52	21.12	21.50	17.97	15.68	25.05

(*a*) See general note on first page of this Chapter.

7. **Value of Output and Cost of Production.**—As the total value of the output for Australia for 1924–25 was estimated at £380,843,986, there remained, after payment of £221,993,978, the value of the raw materials used, of £81,360,021 for salaries and wages and of £11,713,250 for fuel, the sum of £65,776,737 to provide for all other expenditure and profits. The following table gives corresponding particulars for each State, expressed absolutely, and as percentages on the total value of the output for the year 1924–25 :—

FACTORIES.—VALUE OF OUTPUT AND COST OF PRODUCTION, 1924–25.

State.	Raw Materials Used.	Fuel and Light.	Salaries and Wages.	All other Expenditure, Interest, and Profits.	Total Value of Output.
VALUE AND COST, ETC.					
	£	£	£	£	£
New South Wales ..	94,681,328	5,883,494	31,520,849	27,523,202	159,608,873
Victoria	66,290,693	2,964,635	27,444,141	21,477,929	118,177,398
Queensland	30,726,434	782,384	9,228,454	8,405,164	49,142,436
South Australia ..	19,409,892	1,154,902	7,150,658	4,428,541	32,143,993
Western Australia ..	6,993,731	392,753	4,127,839	2,414,459	13,928,782
Tasmania	3,891,900	535,082	1,888,080	1,527,442	7,842,504
Australia ..	221,993,978	11,713,250	81,360,021	65,776,737	380,843,986
PERCENTAGE OF COSTS, ETC., ON TOTAL VALUE.					
	%	%	%	%	%
New South Wales ..	59.32	3.69	19.75	17.24	100.00
Victoria	56.09	2.51	23.22	18.18	100.00
Queensland	62.53	1.59	18.78	17.10	100.00
South Australia ..	60.38	3.59	22.25	13.78	100.00
Western Australia ..	50.21	2.82	29.64	17.33	100.00
Tasmania	49.63	6.82	24.07	19.48	100.00
Australia ..	58.29	3.08	21.36	17.27	100.00

§ 8. Value of Land, Buildings, Plant, and Machinery.

1. **General.**—As an indication of the permanent character and stability of the industries which have been established in Australia, it may be noted that the values of land and buildings and of plant and machinery used in the factories are rapidly increasing. Thus, for the whole of Australia the total value of land and buildings and plant and machinery has increased from 1920–21 to 1924–25 by £70,998,069, i.e., from £129,486,738 to £200,484,807, or at the rate of £17,749,517 per annum.

The following statement shows the values of land and buildings and of plant and machinery used in connexion with manufacturing industries in each State during the year 1924–25 :—

VALUE OF LAND, BUILDINGS, PLANT, AND MACHINERY, 1924–25.

Value of—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tasmania.	Australia.
	£	£	£	£	£	£	£
Land and buildings	41,351,080	28,468,160	7,873,660	6,882,119	4,562,184	2,104,704	91,241,907
Plant and machinery	43,553,900	32,563,815	14,002,476	7,529,854	4,864,253	6,728,602	109,242,900
Total ..	84,904,980	61,031,975	21,876,136	14,411,973	9,426,437	8,833,306	200,484,807

(a) Year ended 31st December, 1924.

The total capital invested in land, buildings, plant, and machinery in manufacturing industries in Australia during the year 1924–25 was approximately £200,484,807 (or £34 2s. 8d. per head of population); of that sum £91,241,907 was invested in land and buildings occupied as manufactories, the remaining £109,242,900 being the value of the plant and machinery used in connexion therewith.

2. **Value of Land and Buildings.**—(i) *Total, Australia, 1920–21 to 1924–25.* The value of the land and buildings occupied in connexion with manufacturing industries may be conveniently classified according to the nature of the industry concerned.

The following table shows for Australia as a whole the approximate value of land and buildings occupied in connexion with manufacturing industries of various classes during each year from 1920–21 to 1924–25 inclusive :—

VALUE OF LAND AND BUILDINGS.—AUSTRALIA, 1920–21 TO 1924–25.

Class of Industry.	1920–21.(a)	1921–22.(a)	1922–23.(a)	1923–24.(a)	1924–25.(a)
	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	1,811,005	1,910,816	1,983,100	2,085,336	2,249,180
II. Treating oils and fats, animal, vegetable, etc.	680,763	741,683	831,004	952,566	1,024,779
III. Processes in stone, clay, glass, etc.	2,814,447	3,067,776	3,242,782	3,592,378	4,247,108
IV. Working in wood	3,061,888	3,359,738	3,889,858	4,101,394	4,322,832
V. Metal works, machinery, etc. ..	10,409,753	10,607,622	11,396,988	12,999,237	14,389,282
VI. Connected with food and drink, etc.	14,218,716	15,306,571	17,064,884	18,277,106	19,568,157
VII. Clothing and textile fabrics, etc. ..	8,265,497	10,122,483	11,588,846	13,247,960	14,841,895
VIII. Books, paper, printing, and engraving	4,738,597	5,158,723	6,132,123	6,747,855	7,376,113
IX. Musical instruments, etc. ..	195,072	226,751	304,432	254,266	325,792
X. Arms and explosives	275,482	277,562	207,500	298,217	417,831
XI. Vehicles and fittings, saddlery and harness, etc.	3,093,034	3,576,519	4,145,937	5,166,587	6,175,406
XII. Ship and boat building and repairing	1,391,113	1,860,720	1,796,690	1,789,464	1,822,238
XIII. Furniture, bedding, and upholstery	1,663,270	1,839,005	2,109,655	2,498,679	2,693,412
XIV. Drugs, chemicals, and by-products	1,687,297	2,059,410	2,171,915	2,351,728	2,453,897
XV. Surgical and other scientific instruments	132,161	156,048	189,777	221,256	274,283
XVI. Jewellery, timepieces, and plated ware	487,763	578,963	580,094	620,686	629,775
XVII. Heat, light, and power	4,867,348	5,138,371	5,277,183	6,102,870	7,170,768
XVIII. Leatherware, n.e.i. .. .	304,506	310,904	359,636	394,402	401,588
XIX. Minor wares, n.e.i.	733,756	1,022,793	1,108,904	860,074	857,571
Total	60,831,468	67,322,458	74,381,308	82,562,061	91,241,907

(a) See general note on first page of this Chapter.

As shown in the above table, the total net increase during the four years was £30,410,439, or an annual average of £7,602,610. The largest increases were in Classes VII., VI., V., XI., VIII. and XVII., and amounted to £6,576,398 ; £5,349,441 ; £3,979,529 ; £3,082,372 ; £2,637,516 and £2,303,420 respectively.

(ii) *Value in each State, 1924–25.* The following table gives similar information for each State for the past year :—

VALUE OF LAND AND BUILDINGS.—STATES, 1924–25.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	992,874	931,200	111,300	130,096	67,227	16,483	2,249,180
II. Treating oils and fats, animal, vegetable, etc.	618,541	221,105	89,134	68,155	19,527	8,317	1,024,779
III. Processes in stone, clay, glass, etc.	2,177,541	1,129,700	150,114	369.207	233,223	187,323	4,247,108
IV. Working in wood ..	1,926,931	1,038,135	439,977	284,483	529,082	104,224	4,322,832
V. Metal works, machinery, etc.	7,512,401	3,634,625	744,259	1,323,381	766,724	407,892	14,389,282
VI. Connected with food and drink, etc.	7,375,561	5,253,495	3,682,660	1,411,546	1,257,062	587,833	19,568,157
VII. Clothing and textile fabrics, etc. ..	6,142,723	6,449,935	703,663	757,708	408,019	379,847	14,841,895
VIII. Books, paper, printing, and engraving ..	3,279,887	2,468,880	684,083	526,791	317,945	98,527	7,376,113
IX. Musical instruments, etc.	158,942	145,960	900	12,650	7,340	..	325,792
X. Arms and explosives ..	150,571	263,460	..	3,800	..	..	417,831
XI. Vehicles and fittings, saddlery and harness, etc.	2,860,461	1,557,605	461,878	800,443	344,635	150,384	6,175,406
XII. Ship and boat building and repairing ..	1,490,038	272,875	8,567	44,808	2,725	3,225	1,822,238
XIII. Furniture, bedding, and upholstery	1,110,205	982,325	219,938	195,313	142,036	43,595	2,693,412
XIV. Drugs, chemicals, and by-products ..	1,340,335	670,780	27,315	260,857	135,935	18,675	2,453,897
XV. Surgical and other scientific instruments ..	121,196	75,810	26,017	26,910	24,350	..	274,283
XVI. Jewellery, timepieces, and plated ware ..	250,452	257,555	29.329	51,520	25,815	15,104	629,775
XVII. Heat, light, and power	3,329,233	2,483,485	453,167	571,636	252,304	80,943	7,170,768
XVIII. Leatherware, n.e.i. ..	192,288	163,690	23,333	11,475	9,570	1,232	401,588
XIX. Minor wares, n.e.i. ..	320,900	467,540	18,026	31,340	18,665	1,100	857,571
Total ..	41,351,080	28,468,160	7,873,660	6,882,119	4,562,184	2,104,704	91,241,907

(*a*) Year ended 31st December, 1924.

The maximum value for Australia of land and buildings in any particular class was in Class VI., amounting to £19,568,157, or 21.45 per cent. on the total value. The next in order of importance were Classes VII., V., VIII., XVII. and XI., in which the values were £14,841,895 ; £14,389,282 ; £7,376,113 ; £7,170,768, and £6,175,406 respectively. The sum of the values for the six classes mentioned amounted to £69,521,621, or 76.19 per cent. on the total value for all classes.

(iii) *Value in each State, 1920–21 to 1924–25.* The total value of factory land and buildings at the end of each year from 1920–21 to 1924–25 is given hereunder.

VALUE OF LAND AND BUILDINGS, 1920–21 TO 1924–25.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1920–21 ..	28,428,917	17,313,350	6,261,266	4,495,667	3,350,608	981,660	60,831,468
1921–22 ..	32,052,303	19,810,170	6,373,504	4,711,022	3,206,295	1,169,164	67,322,458
1922–23 ..	34,559,510	22,428,525	6,615,350	5,324,484	4,001,366	1,452,073	74,381,308
1923–24 ..	37,979,192	24,972,560	7,284,212	6,312.553	4,206,874	1,806,670	82,562,061
1924–25 ..	41,351,080	28,468,160	7,873,660	6,882,119	4,562,184	2,104,704	91,241,907

(*a*) See general note on first page of this Chapter.

Since 1920–21 there has been a general increase throughout Australia, the States showing the greatest progress being New South Wales, Victoria, and South Australia, with annual average increases of £3,230,541, £2,788,703, and £596,613 respectively.

3. Value of Plant and Machinery.—(i) *Total, Australia, 1920–21 to 1924–25.* The following table shows for Australia as a whole the approximate value of plant and machinery used in factories during each year from 1920–21 to 1924–25 inclusive:—

VALUE OF PLANT AND MACHINERY.—AUSTRALIA, 1920–21 TO 1924–25.

Class of Industry.	1920–21.(*a*)	1921–22.(*a*)	1922–23.(*a*)	1923–24.(*a*)	1924–25.(*a*)
	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	1,823,119	1,915,266	2,064,189	2,170,405	2,065,838
II. Treating oils and fats, animal, vegetable, etc.	829,390	881,060	1,035,461	1,147,029	1,166,482
III. Processes in stone, clay, glass, etc.	3,565,083	4,281,438	4,841,188	5,462,976	5,781,144
IV. Working in wood	4,083,711	4,543,992	4,734,078	5,291,155	5,405,755
V. Metal works, machinery, etc.	14,688,625	15,833,262	16,701,195	18,410,074	19,723,951
VI. Connected with food and drink, etc.	16,472,128	18,037,602	20,214,770	20,948,905	22,845,337
VII. Clothing and textile fabrics, etc.	3,781,164	4,840,385	5,775,392	6,722,006	7,164,675
VIII. Books, paper, printing, and engraving	4,246,439	4,890,224	5,800,029	6,706,697	7,282,913
IX. Musical instruments, etc. ..	58,078	66,274	86,660	94,453	111,238
X. Arms and explosives ..	304,800	271,845	216,667	252,658	309,017
XI. Vehicles and fittings, saddlery and harness, etc. ..	853,259	941,849	1,047,440	1,277,937	1,524,491
XII. Ship and boat building and repairing	1,520,756	2,161,809	2,035,576	2,045,117	1,888,127
XIII. Furniture, bedding, and upholstery..	466,952	505,870	559,354	673,810	743,217
XIV. Drugs, chemicals, and byproducts	1,497,619	1,646,119	1,785,912	2,094,340	2,289,112
XV. Surgical and other scientific instruments	32,299	36,542	39,577	45,919	55,094
XVI. Jewellery, timepieces, and plated ware	114,892	125,764	137,512	146,907	144,983
XVII. Heat, light, and power ..	13,515,725	16,032,361	17,887,928	25,030,504	29,538,177
XVIII. Leatherware, n.e.i.	66,544	76,251	91,306	106,574	99,684
XIX. Minor wares, n.e.i.	734,687	997,767	1,027,676	925,073	1,103,665
Total	68,655,270	78,085,680	86,081,910	99,552,539	109,242,900

(*a*) See general note on first page of this Chapter.

During the past four years there has been a steady and substantial net increase amounting in all to £40,587,630, or an annual average of £10,146,908. All classes of industry participated, the largest increase being in Class XVII., "Heat, Light, and Power," where it amounted to £16,022,452, while the next in order were Class VI., "Connected with Food and Drink, etc.," £6,373,209, and Class V., "Metal Works, Machinery, etc.," £5,035,326.

(ii) *Value in each State, 1920–21 to 1924–25.* The figures in the previous table refer to Australia as a whole. In the following table results are shown for each State, and it will be seen that the increase is general throughout the States. Victoria shows the largest advance, viz., £14,384,430; while New South Wales comes next with £12,438,456.

VALUE OF PLANT AND MACHINERY.—STATES, 1920–21 TO 1924–25.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
1920–21 ..	31,115,444	18,179,385	9,615,509	4,473,247	3,340,158	1,931,527	68,655,270
1921–22 ..	35,229,530	21,182,110	10,253,104	4,896,264	3,596,877	2,927,795	78,085,680
1922–23 ..	37,548.766	23,994.715	11,098.375	5,519,035	4,218,550	3,702,469	86,081,910
1923–24 ..	41,141,890	28,223,915	12,321.440	6,929,821	4,496,082	6,439,391	99,552,539
1924–25 ..	43,553,900	32,563,815	14,002,476	7,529,854	4,864,253	6,728,602	109,242,900

(*a*) See general note on first page of this Chapter.

(iii) *Value according to Industry, 1924–25.* The following table shows the value of plant and machinery used in factories in each State during 1924–25, classified according to the nature of the industry in which used :—

VALUE OF PLANT AND MACHINERY.—INDUSTRIES, 1924–25.

Class of Industry.	N.S.W.	Vic.	Q'Land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	920,290	734,965	156,211	115,252	75,160	63,960	2,065,838
II. Treating oils and fats, animal, vegetable, etc.	646,562	263,325	101,657	139,865	10,706	4,367	1,166,482
III. Processes in stone, clay, glass, etc.	3,159,831	1,217,620	335,689	524,355	311,187	232,462	5,781,144
IV. Working in wood ..	1,638,393	1,196,235	783,551	168,730	1,339,222	279,624	5,405,755
V. Metal works, machinery, etc.	11,336,058	3,367,055	1,420,438	1,206,106	671,518	1,722,776	19,723,951
VI. Connected with food and drink, etc... ..	7,533,795	5,448,320	7,159,221	1,309,358	1,040,272	354,371	22,845,337
VII. Clothing and textile fabrics, etc. ..	2,093,667	4,172,360	273,510	226,154	78,040	320,944	7,164,675
VIII. Books, paper, printing, and engraving ..	3,295,430	2,609,205	538,398	396,151	313,123	130,606	7,282,913
IX. Musical instruments, etc.	67,496	41,110	150	1,832	650	..	111,238
X. Arms and explosives ..	40,232	268,395	..	390	..	..	309,017
XI. Vehicles and fittings, saddlery and harness, etc.	586,886	411,325	95,941	344,495	60,430	25,414	1,524,491
XII. Ship and boat building and repairing ..	1,680,676	85,025	26,419	92,707	1,150	2,150	1,888,127
XIII. Furniture, bedding and upholstery ..	287,348	242,510	81,907	70,008	38,075	23,369	743,217
XIV. Drugs, chemicals, and by-products ..	853,215	742,185	29,539	426,231	179,146	58,796	2,289,112
XV. Surgical and other scientific instruments	25,570	15,125	7,150	5,631	1,618	..	55,094
XVI. Jewellery, timepieces, and plated ware ..	54,638	68,045	5,764	12,011	2,657	1,868	144,983
XVII. Heat, light and power	8,978,899	10,868,700	2,974,879	2,484,550	725,749	3,505,400	29,538,177
XVIII. Leatherware, n.e.i. ..	42,424	44,735	3,909	1,156	7,180	280	99,684
XIX. Minor wares, n.e.i. ..	312,490	767,575	8,143	4,872	8,370	2,215	1,103,665
Total ..	43,553,900	32,563,815	14,002,476	7,529,854	4,864,253	6,728,602	109,242,900

(*a*) Year ended 31st December, 1924.

The greatest value for any particular class of industry is for class XVII., " Heat, Light, and Power," and amounts to £29,538,177, or 27.04 per cent. on the total for all classes. The next in order of importance is Class VI., " Connected with Food and Drink, etc.," amounting to £22,845,337, or 20.91 per cent. on the total, followed by Class V., " Metal Works, Machinery, etc.," which amounts to £19,723,951, or 18.05 per cent. on the total value. The total for these three classes amounts to £72,107,465, or 66.00 per cent. on the total value for all classes.

§ 9. Individual Industries.

1. **General.**—The preceding remarks and tables furnish a general view of the recent development of particular classes of industries in Australia treated under the nineteen categories adopted by the Conference of Statisticians in 1906. In order to make the information complete, it is necessary to furnish details of the development of individual industries. While it is not possible, within the limits of this work, to give a full and detailed account of all the manufacturing industries of Australia, it is proposed to deal herein with such particular industries as are of special importance by reason of the number of persons employed, the number of factories, the amount of capital invested therein, the value of the production, or other features of special interest. In cases where there are only one or two establishments of a particular class in any State, returns relative to output are not published, in order to avoid disclosing information as to the operations of individual factories.

2. Tanneries.—(i) *Details for each State, 1924–25.* In Class I. the most important industry is tanning. Formerly the production of tanneries in Australia was confined to the coarser class of leathers, but there are now very few kinds which cannot be produced locally, and by reason of their superiority an export trade has been built up in some varieties.

TANNERIES, 1924–25.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A. (a)	Tas.	Australia.
Number of factories	73	47	16	10	6	3	155
Number of employees	1,205	2,356	281	186	112	49	4,189
Actual horse-power of engines employed	2,567	4,365	443	338	280	156	8,149
Approx. value of land and buildings £	292,324	491,745	23,916	28,408	30,581	12,211	879,185
Approx. value of plant and machinery £	202,249	401,375	36,065	22,669	23,780	8,465	694,603
Total amount of wages paid during year £	267,321	521,601	51,105	36,251	23,462	6,752	906,492
Value of fuel used .. .. £	23,158	47,261	3,342	4,615	2,078	404	80,858
Value of raw material worked up £	1,311,599	1,692,544	251,161	110,600	97,999	43,875	3,507,778
Total value of output .. £	1,780,906	2,673,149	349,171	165,017	140,508	62,254	5,171,005
Value added in process of manufacture £	446,149	933,344	94,668	49,802	40,431	17,975	1,582,369

(*a*) Year ended 31st December, 1924.

(ii) *Development in Australia, 1920–21 to 1924–25.* The development of the tanning industry during the period 1920–21 to 1924–25 is shown in the following table :—

TANNERIES.—AUSTRALIA, 1920–21 TO 1924–25.

Items.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of factories	..	164	164	163	166	155
Number of employees	..	4,026	4,438	4,542	4,485	4,189
Actual horse-power of engines used	..	6,868	7,697	7,740	8,182	8,149
Approx. value of land and buildings	£	684,892	721,699	769,328	818,212	879,185
Approx. value of plant and machinery	£	520,400	581,008	627,560	684,329	694,603
Total amount of wages paid ..	£	825,751	935,009	963,526	964,563	906,492
Value of fuel used	£	62,247	72,581	75,064	80,117	80,858
Value of raw material worked up	£	4,596,271	3,684,000	3,765,981	3,630,198	3,507,778
Value of final output	£	6,179,417	5,451,596	5,568,358	5,475,956	5,171,005
Value added in process of manufacture	£	1,520,899	1,695,015	1,727,313	1,765,641	1,582,369

Compared with the results for the years 1922–23 and 1923–24 there was a decline in all items during 1924–25, while the production of leather decreased from 55,913,930 lbs. in 1922–23 to 48,911,506 lbs. in 1924–25. The output in the latter year, however, was nearly four million lbs. greater than that of 1920–21, although higher prices in the earlier year were responsible for the greater value of the production returned therein.

(iii) *Raw Materials Used and Production, 1924–25.* The quantities of raw materials used and leather produced in tanneries in each State are shown in the following table :—

TANNERIES.—RAW MATERIALS USED AND PRODUCTION, 1924–25.

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Hides and calf skins	No.	884,195	1,340,469	178,889	56,138	58,159	11,614	2,529,464
Sheep pelts ..	,,	1,742,385	1,282,105	62,064	76,710	..	..	3,163,264
Other skins ..	,,	669,357	567,470	143,405	5,534	5,852	1,080	1,392,698
Bark	tons	10,639	12,085	1,839	967	1,211	270	27,011
Leather made ..	lbs.	19,276,236	22,070,564	3,739,421	1,241,414	2,181,093	402,778	48,911,506
Basils produced ..	,,	1,559,111	1,519,222	62,064	76,716	..	..	3,217,113

(*a*) Year ended 31st December, 1924.

3. Fellmongering and Wool-scouring Works.—(i) *Details for each State, 1924–25.* The next industry in importance in Class I. is that of fellmongering and wool-scouring, one of the earliest industries established in Australia. The following table gives particulars of the industry in each State during the past year :—

FELLMONGERING AND WOOL-SCOURING WORKS, 1924–25.

Items.		N.S.W.	Vic.	Q'land.	S. Aust.	W.A. (*a*)	Tas.	Australia.
Number of factories	..	40	29	18	3	4	..	94
Number of employees	..	1,081	459	337	74	46	..	1,997
Actual horse-power of engines used	..	2,968	1,555	532	192	211	..	5,458
Approx. value of land and buildings	£	271,117	193,020	72,747	14,938	18,436	..	570,258
Approx. value of plant and machinery	£	351,679	165.940	99,135	25,420	26,786	..	668,960
Total amount of wages paid	£	189,136	96,648	49,416	13,437	8,301	..	356,938
Value of fuel used	£	34,146	25.456	10,864	2,218	3,022	..	75,706
Value of raw material worked up	£	3.550,456	1,783.543	1,997,244	232,923	249,234	..	7,813,400
Value of final output	£	3,792,603	2,020,893	2,009,722	252,124	268,631	..	8,343,973
Value added in process of manufacture	£	208,001	211,894	1,614	16,983	16,375	..	454,867

(*a*) Year ended 31st December, 1924.

(ii) *Development in Australia, 1920–21 to 1924–25.* The following return furnishes particulars of fellmongering and wool-scouring establishments in Australia for the last five years :—

FELLMONGERING AND WOOL-SCOURING WORKS.—AUSTRALIA, 1920–21 TO 1924–25.

Items.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of factories	..	97	97	99	102	94
Number of employees	..	2,707	2,571	2,576	2,161	1,997
Actual horse-power of engines used	..	6.278	6,657	6,530	6,250	5,458
Approx. value of land and buildings	£	548,084	541,561	542,373	594,547	570,258
Approx. value of plant and machinery	£	681.366	720.972	733,919	766,689	668,960
Total amount of wages paid	£	510.286	533,705	546,015	422,788	356,938
Value of fuel used	£	84,833	99,741	108,019	84,445	75,706
Value of raw material worked up	£	6,682,138	5,660,278	6,848,785	8,158,925	7,813,400
Value of final output	£	7,913,477	6,699,452	8,602,162	8,977,412	8,343,973
Value added in process of manufacture	£	1,146,506	939,433	1,645,358	734,042	454,867

The wool-scouring industry developed considerably under the régime of the Central Wool Committee, and during 1919–20 the record output of 107,726,653 lbs. of scoured wool was produced. The production declined considerably since that date, however, and during 1924–25 only 82,240,117 lbs. of greasy wool and 3,329,237 skins were treated for an output of 46,956,822 lbs. of scoured wool.

4. Soap and Candle Factories.—(i) *Details for each State, 1924–25.* In Class II, soap and candle factories are the most important establishments. The manufacture of these two products is frequently carried on in the same factory, so that separate returns cannot be obtained; it may, however, be noted that the manufacture of soap is the more important. The following table gives particulars of soap and candle factories in each State during the year 1924–25 :—

SOAP AND CANDLE FACTORIES, 1924–25.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.A. (c)	Tas.	Australia.
Number of factories	29	17	11	5	4	1	67
Number of employees	1,165	714	186	231	84	45	2,425
Actual horse-power of engines employed	1,250	806	210	374	94	10	2,744
Approx. value of land and buildings £	351,427	165,460	43,210	49,978	(a)	(a)	(b) 637,819
Approx. value of plant and machinery £	389,029	201,400	52,251	117,344	(a)	(a)	(b) 775,027
Total amount of wages paid during year £	206,561	141,838	35,961	43,435	(a)	(a)	(b) 454,149
Value of fuel used .. £	41,095	27,877	3,011	8,282	(a)	(a)	(b) 83,138
Value of raw material worked up £	847,548	743,210	123,829	205,724	(a)	(a)	(b) 2,037,505
Total value of output .. £	1,483,824	1,176,919	227,145	309,548	(a)	(a)	(b) 3,365,010
Value added in process of manufacture £	595,181	405,832	100,305	95,542	(a)	(a)	(b) 1,244,367

(a) Particulars not available for publication.

(b) Including Western Australia and Tasmania.

(c) Year ended 31st December, 1924.

(ii) *Development in Australia, 1920–21 to 1924–25.* The following table gives similar particulars for the last five years as regards Australia as a whole :—

SOAP AND CANDLE FACTORIES.—AUSTRALIA, 1920–21 TO 1924–25.

Items.		1920–21.a b	1921–22.b	1922–23.b	1923–24.b	1924–25.b
Number of factories	..	62	69	69	70	67
Number of employees	..	2,008	2,329	2,419	2,556	2,425
Actual horse-power and engines used	..	1,782	2,015	2,320	2,622	2,744
Approx. value of land and buildings	£	426,339	479,872	563,216	650,163	637,819
Approx. value of plant and machinery	£	537,534	610,418	759,192	834,678	775,027
Total amount of wages paid ..	£	326,449	394,567	415,681	438,748	454,149
Value of fuel used	£	88,728	94,204	75,728	77,976	83,138
Value of raw material worked up	£	2,119,957	1,755,252	1,790,540	1,729,946	2,037,505
Value of final output	£	2,941,833	3,007,286	3,042,506	2,915,030	3,365,010
Value added in process of manufacture	£	733,148	1,157,830	1,176,238	1,107,108	1,244,367

(a) Excluding three soap and candle establishments in Western Australia.

(b) Including other small establishments in Western Australia.

(iii) *Raw Materials Used and Production, 1920–21 to 1924–25.* The following statement shows the quantities of certain raw materials used, together with the production, in soap and candle factories in Australia during the years 1920–21 to 1924–25 :—

SOAP AND CANDLE FACTORIES.—RAW MATERIALS USED, AND PRODUCTION, AUSTRALIA, 1920–21 TO 1924–25.

Particulars.		1920–21.a	1921–22.a	1922–23.a	1923–24.a	1924–25.a
Tallow used	cwt.	353,001	460,164	482,422	434,622	483,756
Alkali used	,,	120,882	134,994	144,092	140,923	168,587
Coconut oil used	gal.	459,013	591,117	662,161	739,377	796,400
Soap made	cwt.	692,192	824,002	878,238	883,944	997,902
Candles made	,,	87,304	91,116	101,586	86,684	80,771

(a) Exclusive of Western Australia.

5. Saw-mills, etc.—(i) *Details for States, 1924–25.* The most important industry in Class IV. is that of saw-milling. As separate particulars of forest saw-mills are not available for some of the States, both forest and other saw-mills, as well as joinery, moulding, and box factories, have been combined in the following table :—

SAW-MILLS, FOREST AND OTHER ; JOINERY, ETC., 1924–25.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
Number of factories ..	863	661	321	128	167	172	2,312
Number of employees ..	9,318	9,346	5,413	1,934	5,975	2,055	34,041
Actual horse-power of engines employed	22,661	18,754	11,045	3,398	9,937	3,304	69,099
Approximate value of land and buildings .. £	1,648,279	913,710	410,241	270,588	529,082	98,105	3,870,005
Approximate value of plant and machinery .. £	1,471,187	1,101,665	731,392	165,009	1,339,222	272,964	5,081,439
Total amount of wages paid during year .. £	1,799,690	1,878,216	1,012,885	391,382	1,345,090	326,865	6,754,128
Value of fuel used .. £	66,218	52,154	19,702	12,304	10,987	12,475	173,840
Value of raw material worked up .. .. £	4,624,876	2,349,589	1,777,212	1,393,943	395,321	217,558	10,758,499
Total value of output £	7,379,459	5,471,210	3,612,683	1,971,783	2,120,248	673,583	21,228,966
Value added in process of manufacture .. £	2,688,365	3,069,467	1,815,769	565,536	1,713,940	443,550	10,296,627

(*a*) Year ended 31st December, 1924.

(ii) *Development in Australia, 1920–21 to 1924–25.* The development of forest and other saw-mills, etc., since 1920–21 is shown in the following table :—

SAW-MILLS, FOREST AND OTHER ; JOINERY, ETC.—AUSTRALIA, 1920–21 TO 1924–25.

Items.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of establishments		1,897	1,943	2,067	2,315	2,312
Number of employees		30,074	30,522	31,173	34,092	34,041
Actual horse-power of engines used ..		57,947	56,046	57,615	64,580	69,099
Approx. value of land and buildings	£	2,773,952	3,036,444	3,525,233	3,693,174	3,870,005
Approx. value of plant and machinery	£	3,868,390	4,271,225	4,446,516	4,955,110	5,081,439
Total amount of wages paid ..	£	5,248,331	5,701,531	5,832,137	6,576,474	6,754,128
Value of fuel used	£	102,195	115,049	128,106	140,152	173,840
Value of raw material worked up ..	£	9,344,674	8,348,619	9,104,572	10,344,024	10,758,499
Value of final output	£	17,446,035	16,832,110	17,912,365	20,755,852	21,228,966
Value added in process of manufacture	£	7,999,166	8,368,442	8,679,687	10,271,676	10,296,627

The pre-war development in Australia in the building and other trades using timber received a temporary check during the war years, but the all-round increases since 1920–21 in the number of employees, in wages, value of materials used, and final output, as well as in capital invested in land and buildings and plant and machinery, show that the industries concerned have practically regained their normal rate of progression. The saw-mill output of native timber increased from 601,248,000 super. feet in 1920–21 to 664,550,000 super. feet in 1924–25.

6. Agricultural Implement Works.—(i) *General.* The manufacture of agricultural implements is an important industry in Australia, and is of particular interest, owing to the fact that it was one of the first to which it was sought to apply the so-called "New Protection." The articles manufactured include header and stripper-harvesters, strippers, reapers and binders, reaper threshers, stump-jump and other ploughs, harrows, disc and other cultivators, winnowers, corn-shellers and baggers, drills, and other implements employed in agriculture. The stripper-harvester, which combines the stripper with a mechanism for winnowing and bagging grain, is an Australian invention, and is exported to many countries.

(ii) *Details for States, 1924–25.* The following table gives particulars of the agricultural implement works in each State for the year 1924–25 :—

AGRICULTURAL IMPLEMENT WORKS, 1924–25.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories	30	64	7	46	6	..	153
Number of employees	571	3,208	275	1,255	226	..	5,535
Actual horse-power of engines employed	377	2,443	241	1,021	267	..	4,349
Approx. value of land and buildings £	165,707	223,565	36,125	157,556	42,814	..	625,767
Approx. value of plant and machinery £	55,176	315,620	24,595	156,991	7,031	..	559,413
Total amount of wages paid during year £	127,344	731,162	48,528	230,948	43,590	..	1,181,572
Value of fuel used .. £	4,393	47,178	1,809	15,345	1,955	..	70,680
Value of raw material worked up £	147,883	817,032	129,866	202,237	272,438	..	1,569,456
Total value of output .. £	370,530	1,847,949	198,278	529,069	337,182	..	3,283,008
Value added in process of manufacture £	218,254	983,739	66,603	311,487	62,789	..	1,642,872

(a) Year ended 31st December, 1924.

(iii) *Development in Australia, 1920–21 to 1924–25.* The Agricultural Implement industry declined considerably during the war years, but steady development has taken place since 1920–21, and substantial increases have occurred in all the items enumerated in the following table. Details for the past five years are as follows :—

AGRICULTURAL IMPLEMENT WORKS.—AUSTRALIA, 1920–21 TO 1924–25.

Items.	1920–21.a	1921–22.	1922–23.	1923–24.	1924–25.
Number of factories	141	140	154	160	153
Number of employees	4,299	4,696	4,674	5,584	5,535
Actual horse-power of engines used ..	2,576	3,312	3,619	3,807	4,349
Approx. value of land and buildings £	392,870	435,233	499,987	590,066	625,767
Approx. value of plant and machinery £	431,152	478,896	508,921	595,151	559,413
Total amount of wages paid .. £	794,554	987,610	941,778	1,126,002	1,181,572
Value of fuel used .. .. £	55,709	60,410	54,546	63,096	70,680
Value of raw material worked up £	1,064,611	1,387,571	1,190,905	1,442,679	1,569,456
Value of final output .. .. £	2,288,713	2,863,875	2,685,342	3,132,305	3,283,008
Value added in process of manufacture £	1,168,393	1,415,894	1,439,891	1,626,530	1,642,872

(a) Excluding three establishments in Western Australia.

7. **Engineering Works, Ironworks, and Foundries.**—(i) *Details for States, 1924–25.* The classification in these industries is not very satisfactory. Generally, engineering shops, ironworks, and foundries are included, as also are factories for making safes, patterns, meters, and springs. Railway workshops, agricultural implement factories, metal extraction and ore reduction works, galvanized iron works, stove and oven-making works, and wire-working establishments are not included. The combination of industries is rendered necessary owing to the limited classification still adopted by some of the States.

ENGINEERING WORKS, IRONWORKS, AND FOUNDRIES, 1924–25.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories ..	522	554	60	89	99	23	1,347
Number of employees ..	14,898	10,945	2,433	2,888	1,520	387	33,071
Actual horse-power of engines employed ..	32,292	13,015	2,694	2,449	2,253	398	53,101
Approximate value of land and buildings £	2,662,568	1,598,150	223,771	269,226	215,932	41,617	5,011,264
Approximate value of plant and machinery £	4,080,914	1,626,700	302,424	310,611	291,467	52,159	6,664,275
Total amount of wages paid during year .. £	3,362,823	2,313,685	481,678	552,087	304,833	80,227	7,095,333
Value of fuel used £	433,125	173,634	25,423	46,406	23,713	7,272	709,573
Value of raw materials worked up .. £	10,163,896	2,675,677	667,531	770,415	349,519	44,837	14,671,875
Total value of output £	15,270,907	6,398,790	1,415,277	1,557,472	842,422	159,871	25,644,739
Value added in process of manufacture .. £	4,673,886	3,549,479	722,323	740,651	469,190	107,762	10,263,291

(a) Year ended 31st December 1924.

In addition to engineering works which supply ordinary requirements, there is now a large number of establishments which engage in the manufacture of special classes of machinery and implements. The manufacture of mining, smelting, and textile machinery and apparatus forms an important section of this industry.

(ii) *Development in Australia, 1920–21 to 1924–25.* The development of engineering works, ironworks, and foundries in Australia since 1920–21 is shown in the following table :—

ENGINEERING WORKS, IRONWORKS, AND FOUNDRIES.—AUSTRALIA. 1920–21 TO 1924–25.

Items.		1920–21.*a*	1921–22.	1922–23.	1923–24.	1924–25.
Number of factories ..	..	1,248	1,281	1,368	1,343	1,347
Number of employees ..	..	33,914	30,628	31,872	33,052	33,071
Actual horse-power of engines used	..	48,852	51,780	51,328	52,051	53,101
Approx. value of land and buildings	£	4,108,640	4,197,014	4,560,030	4,570,486	5,011,264
Approx. value of plant and machinery	£	5,702,388	5,933,667	6,201,317	6,348,433	6,664,275
Total amount of wages paid ..	£	6,523,651	6,265,599	6,078,966	6,949,295	7,095,333
Value of fuel used	£	631,032	623,273	560,783	685,916	709,573
Value of raw material worked up	£	14,247,190	11,727,407	8,794,023	13,386,286	14,671,875
Value of final output ..	£	24.361,080	21,468,595	18,260,945	24,151,439	25,644,739
Value added in process of manufacture	£	9,482,858	9,117,915	8,906,139	10,079,237	10,263,291

(*a*) Including three agricultural implement establishments in Western Australia.

The expansion of local industry during recent years has necessitated an increased provision of machinery, and the difficulty of obtaining overseas supplies during the war and for some years after created an opportunity of which the Australian engineering trade has availed itself largely. The industry has grown to large proportions, but its progress during the past two years was restricted by the severe competition encountered from overseas, while the depression in 1921–22 and 1922–23 was caused by the closing down of the Broken Hill Proprietary Company's Steel Works for the greater part of that period. These industries are all large consumers of Australian materials, and for this reason their progress is doubly important.

8. **Railway and Tramway Workshops.**—(i) *Details for each State, 1924–25.* The railway and tramway workshops which form an important item in Class V. are chiefly State-owned institutions. The following table giving details concerning them includes, however, private and municipal establishments for manufacturing and repairing rolling-stock :—

RAILWAY AND TRAMWAY WORKSHOPS, 1924–25.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
Number of factories ..		45	18	11	22	20	7	123
Number of employees ..		12,122	5,888	3,121	2,888	1,955	371	26,345
Actual horse-power of engines employed		7,930	4,156	3,331	2,260	2,965	323	20,965
Approximate value of land and buildings ..	£	2,066,186	821,770	292,440	520,721	471,893	1,165	4,174,175
Approximate value of plant and machinery	£	2,379,636	809,250	244,664	314,215	364,642	91,847	4,204,254
Total amount of wages paid during year ..	£	2,919,222	1,289,834	705,398	721,439	413,030	91,753	6,140,676
Value of fuel used	£	82,780	34,510	12,099	22,913	21,082	2,376	175,760
Value of raw material worked up	£	2,128,349	1,582,517	408,272	364,313	402,736	33,541	4,919,728
Total value of output	£	5,700,235	3,254,715	1,050,843	1,397,810	835,211	145,363	12,384,177
Value added in process of manufacture ..	£	3,489,106	1,637,688	630,472	1,010,584	411,393	109,446	7,288,689

(*a*) Year ended 31st December, 1924.

In addition to the above, a railway workshop is in operation in the Northern Territory. The work is confined almost exclusively to repairs to rolling-stock, etc., no new goods being manufactured. For the sake of convenience this establishment is not included in any of the tables in this chapter.

(ii) *Development in Australia, 1920–21 to 1924–25.* The following table shows the development of railway and tramway workshops in Australia since 1920–21 :—

RAILWAY AND TRAMWAY WORKSHOPS.—AUSTRALIA, 1920–21 TO 1924–25.

Items.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of factories	103	101	112	122	123
Number of employees	23,670	23,802	23,672	25,130	26,345
Actual horse-power of engines used ..	16,142	15,889	16,603	17,830	20,965
Approx. value of land and buildings £	3,123,818	3,287,393	3,429,066	3,887,082	4,174,175
Approx. value of plant and machinery £	2,810,282	3,111,789	3,299,252	3,867,175	4,204,254
Total amount of wages paid .. £	5,273,942	5,609,957	5,591,520	5,799,183	6,140,676
Value of fuel used .. .. £	132,956	143,357	155,795	159,651	175,760
Value of raw material worked up £	3,808,850	4,518,058	4,459,599	4,596,829	4,919,728
Value of final output .. £	9,488,649	10,610,662	10,603,049	11,652,306	12,384,177
Value added in process of manufacture £	5,546,843	5,949,247	5,987,655	6,895,826	7,288,689

The growth of the railway and tramway systems, conjointly with heavy increases in passenger and goods traffic throughout Australia, has resulted in corresponding activity in workshops engaged in the manufacture or repair of rolling-stock, etc. During the war the operations of these establishments were restricted to necessary work, but since 1920–21 the rate of expansion has been rapid. The number of employees has risen from 23,670 to 26,345, and the value of the output has increased by more than 30 per cent. during the past four years.

9. **Metal Extraction and Ore Reduction Works.**—The following table gives particulars of metal extraction and ore reduction works. The classification of these works is not uniform in the several States, and the combination of industries is, therefore, somewhat unsatisfactory. The returns do not include particulars of plants used on mines.

METAL EXTRACTION AND ORE REDUCTION WORKS, 1924–25.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.A. (*a*)	Tas.	Australia.
Number of factories	20	8	8	2	..	3	41
Number of employees	3,058	71	576	1,506	..	1,094	6,305
Actual horse-power of engines employed	25,185	57	4,234	6,693	..	35,937	72,106
Approx. value of land and buildings £	595,839	18,385	18,978	*b*	..	*b*	*c* 1,167,481
Approx. value of plant and machinery £	2,903,221	9,420	686,277	*b*	..	*b*	*c* 5,470,841
Total amount of wages paid during year £	928,845	13,035	169,179	*b*	..	*b*	*c* 1,836,078
Value of fuel used .. £	1,608,547	2,544	28,074	*b*	..	*b*	*c* 2,261,916
Value of raw material worked up £	7,192,207	113,857	154,505	*b*		*b*	*c* 13,330,722
Total value of output .. £	12,098,116	149,563	794,765	*b*	..	*b*	*c* 20,913,201
Value added in process of manufacture £	3,297,362	33,162	612,186	*b*	..	*b*	*c* 5,320,563

(*a*) See second paragraph on next page. (*b*) Information not available for publication.
(*c*) Including South Australia and Tasmania.

The position of the base metals, with the exception of copper and tin, has shown considerable improvement since 1921, when the industry suffered a serious depression owing to the fall in metal prices.

In Western Australia all the plants are worked on the mines, and are therefore not included.

10. **Bacon-curing Factories.**—(i) *Details for each State, 1924–25.* The following table gives particulars of factories engaged in bacon-curing in each State during the past year :—

BACON-CURING FACTORIES, 1924–25.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories	25	21	6	11	6	5	74
Number of employees	359	531	485	191	59	34	1,659
Actual horse-power of engines employed	596	1,542	708	430	266	97	3,639
Approximate value of land and buildings .. .. £	161,016	173,875	127,235	39,874	33,616	9,704	545,320
Approximate value of plant and machinery .. £	75,078	96,185	76,623	24,579	14,624	3,251	290,340
Total amount of salaries and wages paid .. £	90,787	123,300	108,893	33,906	13,646	6,677	377,209
Value of fuel used .. £	16,419	20,539	13,446	3,841	2,856	2,102	59,203
Value of raw material worked up £	891,639	1,262,862	740,650	279,133	153,249	82,380	3,409,913
Total value of output £	1,092,347	1,571,357	1,092,502	355,829	196,730	99,439	4,408,204
Value added in process of manufacture .. .. £	184,289	287,956	338,406	72,855	40,625	14,957	939,088

(a) Year ended 31st December, 1924.

(ii) *Quantity and Value of Production.* The following table shows the number of pigs killed and the quantity and value of the production of bacon-curing factories in each State for the year 1924–25 :—

BACON-CURING FACTORIES.—PIGS KILLED, AND PRODUCTION, 1924–25.

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (b)	Tasmania.	Australia.
PIGS KILLED.								
Number		225,297	218,158	206,454	57,281	(a)19,657	18,357	745,204
PRODUCTS (,000 OMITTED).								
Bacon and ham ..	lbs.	19,765	20,432	15,335	4,786	2,608	1,677	64,603
Lard	,,	668	985	766	172	103	72	2,766
VALUE.								
Bacon and ham ..	£	961,623	1,360,116	699,516	299,038	167,164	87,952	3,575,409
Lard	£	21,097	31,094	24,325	7,326	4,540	2,631	91,013
Other products ..	£	95,842	180,147	368,661	49,665	13,940	8,856	717,111

(a) In Western Australia, a portion of the bacon and ham treated in factories is imported and subsequently smoked in that State. (b) Year ended 31st December, 1924.

Bacon and ham and other pig products are dealt with more fully in Chapter XVIII. *Farmyard, Dairy, and Bee Products.*

11. Butter, Cheese, and Condensed Milk Factories.—(i) *Details for each State, 1924–25.* The subjoined table gives particulars of butter, cheese and condensed milk factories in each State during the year 1924–25 :—

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES, 1924–25.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.A. (a)	Tas.	Australia.
Number of factories	183	186	128	62	8	33	600
Number of employees	1,454	2,427	1,386	362	50	147	5,826
Actual horse-power of engines employed	5,428	5,543	3,369	1,023	303	268	15,934
Approximate value of land and buildings .. .. £	517,904	817,060	292,216	181,249	15,809	39,201	1,863,439
Approximate value of plant and machinery .. £	694,569	995,465	498,083	143,547	18,500	34,863	2,385,027
Total amount of wages paid £	363,360	559,953	269,219	63,634	10,208	21,315	1,287,689
Value of fuel used .. £	90,969	159,178	42,008	12,806	1,342	5,382	311,685
Value of raw material worked up .. .. £	6,753,812	6,879,638	4,265,426	829,571	94,380	257,912	19,080,739
Total value of output £	7,602,383	8,212,788	5,449,950	1,007,676	121,429	331,988	22,726,214
Value added in process of manufacture .. .. £	757,602	1,173,972	1,142,516	165,299	25,707	68,694	3,333,790

(*a*) Year ended 31st December, 1924.

(ii) *Development in Australia, 1920–21 to 1924–25.* The following table shows the progress of the factories in this industry during the past five years :—

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—AUSTRALIA, 1920–21 TO 1924–25.

Items.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of factories	..	579	591	573	583	600
Number of employees	..	4,981	5,368	5,141	5,233	5,826
Actual horse-power of engines used	..	11,920	11,947	13,149	14,836	15,934
Approx. value of land and buildings	£	1,229,964	1,335,760	1,490,729	1,770,157	1,863,439
Approx. value of plant and machinery	£	1,491,974	1,711,169	2,184,761	2,155,682	2,385,027
Total amount of wages paid ..	£	944,783	1,109,860	1,091,218	1,112,425	1,287,689
Value of fuel used	£	225,356	263,585	244,144	249,988	311,685
Value of raw material worked up ..	£	22,096,843	18,062,449	17,464,258	16,542,862	19,080,739
Value of final output	£	25,400,335	22,003,615	20,746,782	19,526,119	22,726,214
Value added in process of manufacture	£	3,078,136	3,677,581	3,038,380	2,733,269	3,333,790

(iii) *Quantity and Value of Production.* The following table shows the quantity and value of butter, cheese, and condensed milk produced, and the quantity of milk used in butter, cheese, and condensed milk factories in each State during the past year :—

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—PRODUCTION, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tasmania.	Australia.
MILK USED (,000 OMITTED).							
Butter factories .. gals.	238,115	214,835	137,190	24,327	3,405	10,385	628,257
Cheese ,, .. ,,	7,907	6,868	12,458	3,579	..	682	31,494
Condensed milk factories ,,	2,010	12,961	2,658	..	..	..	17,629
PRODUCTS (,000 OMITTED).							
Butter .. .. lbs.	112,505	95,454	67,916	12,433	1,660	4,590	294,558
Cheese .. .. ,,	7,602	5,964	12,639	3,743	..	693	30,641
Condensed and concentrated milk .. .. lbs.	3,695	33,819	10,512	..	..	..	48,026
Powdered milk .. ,,	2,109	11,874	..	..	..	..	13,983

(*a*) Year ended 31st December, 1924.

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—PRODUCTION 1924–25—*continued.*

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tasmania.	Australia
VALUE (,000 OMITTED).								
Butter	£	6,953	6,263	4,691	856	125	308	19,196
Cheese	£	257	197	466	120	..	24	1,064
Condensed and concentrated milk	£	114	1,005	289	..	..	..	1,408
Powdered Milk ..	£	131	498	..	..	..	..	629

(*a*) Year ended 31st December, 1924.

The butter, cheese, and condensed milk industries are dealt with more fully in the Chapter entitled *Farmyard, Dairy, and Bee Products.*

12. **Meat and Fish Preserving, Ice and Refrigerating Works.**—These industries are now of considerable importance in Australia. Large freezing works have been installed at many ports throughout the continent for the purpose of freezing produce chiefly for export, while insulated space for the carriage of frozen produce is provided by a number of steamship companies trading between Australia and other parts of the world.

The details given in the subjoined table include ice-making and freezing works, also meat-canning factories, separate particulars for each item for all the States not being available.

MEAT AND FISH PRESERVING, ICE AND REFRIGERATING WORKS, 1924–25.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
Number of factories		175	54	69	19	37	14	368
Number of employees.. ..		1,744	1,317	4,272	205	390	74	8,002
Actual horse-power of engines employed		12,563	8,674	13,024	1,882	2,787	356	39,286
Approximate value of land and buildings	£	1,307,014	938,025	1,631,423	199,452	519,481	60,200	4,655,595
Approximate value of plant and machinery ..	£	1,250,395	769,095	1,103,528	146,953	384,501	27,500	3,681,972
Total amount of wages paid during year	£	356,121	253,539	995,739	42,219	105,590	12,124	1,765,332
Value of fuel used ..	£	132,515	64,188	127,051	20,758	23,569	3,398	371,479
Value of raw material worked up	£	6,268,329	1,836,381	4,087,929	135,954	229,272	3,131	12,560,996
Total value of output	£	7,277,417	2,376,531	5,646,271	223,171	441,601	27,808	15,992,799
Value added in process of manufacture	£	876,573	475,962	1,431,291	66,459	188,760	21,279	3,060,324

(*a*) Year ended 31st December, 1924.

Exclusive of Victoria, for which State particulars are not available, the returns show that 227,601 tons of ice, valued at £516,684, were manufactured in Australia in 1924–25.

Full particulars regarding quantities and values of beef, mutton, and lamb preserved by cold process, exported from Australia during a series of years, will be found in Chapter XVI.

13. **Biscuit Factories.**—The following table gives particulars regarding establishments at which the manufacture of biscuits, cakes, etc., was carried on in each State during the year 1924–25 :—

BISCUIT, ETC., FACTORIES, 1924–25.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tas. (b)	Australia.
Number of factories	63	8	25	14	18	..	128
Number of employees ..	2,815	1,440	713	393	343	..	5,704
Actual horse-power of engines employed	1,277	533	347	295	168	..	2,620
Approximate value of land and buildings .. .. £	512,666	120,095	116,105	88,370	44,688	..	881,924
Approximate value of plant and machinery .. £	219,525	136,345	68,035	59,864	23,542	..	507,311
Total amount of wages paid during year .. .. £	452,947	220,255	135,247	59,697	46,355	..	914,501
Value of fuel used .. £	55,647	22,964	5,519	7,501	5,759	..	97,390
Value of raw material worked up £	1,520,652	677,272	238,940	205,425	167,926	..	2,810,215
Total value of output £	2,657,695	1,134,206	539,586	324,699	251,900	..	4,908,086
Value added in process of manufacture .. .. £	1,081,396	433,970	295,127	111,773	78,215	..	2,000,481

(a) Year ended 31st December, 1924. (b) Included with confectionery.

14. Jam and Fruit Preserving, Pickles, Sauces, and Vinegar Factories.—(i) *Details for each State, 1924–25.* The subjoined table gives particulars of factories at which these industries were carried on in each State during the year 1924–25. Separate returns for the different branches of the industry are not available for most of the States.

JAM AND FRUIT PRESERVING, PICKLES, ETC., FACTORIES, 1924–25.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories	44	52	16	17	14	21	164
Number of employees ..	1,971	2,501	385	684	108	629	6,278
Actual horse-power of engines employed	752	1,161	404	266	106	1,300	3,989
Approximate value of land and buildings .. .. £	351,447	288,180	57,176	102,681	23,146	114,658	937,288
Approximate value of plant and machinery .. £	161,757	267,725	51,854	78,400	11,809	45,130	616,675
Total amount of wages paid during year .. .. £	204,568	411,818	53,533	101,280	11,049	99,069	881,317
Value of fuel used .. £	17,282	30,948	2,930	7,142	787	10,063	69,152
Value of raw material worked up £	912,404	1,237,953	246,128	315,264	58,584	357,260	3,127,593
Total value of output £	1,475,925	2,090,690	342,664	474,786	85,699	525,907	4,995,671
Value added in process of manufacture .. .. £	546,239	821,789	93,606	152,380	26,328	158,584	1,798,926

(a) Year ended 31st December, 1924.

(ii) *Development in Australia, 1920–21 to 1924–25.* The following table refers to jam and fruit preserving, etc., establishments in Australia for the last five years :—

JAM AND FRUIT PRESERVING, PICKLES, ETC., FACTORIES.—AUSTRALIA, 1920–21 TO 1924–25.

Items.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of factories	..	154	164	170	175	164
Number of employees	..	6,243	5,958	5,983	6,600	6,278
Actual horse-power of engines employed	..	2,996	3,257	3,698	3,941	3,989
Approx. value of land and buildings	£	760,855	830,484	895,513	981,354	937,288
Approx. value of plant and machinery	£	516,348	556,801	606,716	599,857	616,675
Total amount of wages paid ..	£	749,980	685,017	781,429	885,104	881,317
Value of fuel used	£	58,737	48,987	56,718	63,406	69,152
Value of raw material worked up	£	3,465,562	2,541,268	2,704,356	2,939,187	3,127,593
Total value of output	£	5,262,608	3,975,779	4,549,216	4,722,383	4,995,671
Value added in process of manufacture	£	1,738,309	1,385,524	1,788,142	1,719,790	1,798,926

The progress of the jam industry was very marked during the war years, when an important export trade was built up. During the past four years, however, the exports have declined to insignificant proportions, and the production of jams and jellies fell from 90,140,566 lbs. in 1920–21 to 64,657,052 lbs. in 1924–25. The output of preserved fruit, however, is growing steadily, and during 1924–25, 65,874,977 lbs. were processed, while the production of pickles and sauces is also on the increase.

(iii) *Production.* The following table shows the quantity and value of jams, pickles, and sauces manufactured in each State during 1924–25 :—

JAMS, PRESERVED FRUIT, PICKLES AND SAUCES.—OUTPUT, 1924–25.

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (b)	Tasmania.	Australia.
QUANTITY (,000 OMITTED).								
Jams	lbs.	18,187	24,659	3,911	7,416	(a)	10,484	64,657
Pulp	,,	3,379	16,959	823	5,993	(a)	5,767	32,921
Fruit, preserved ..	,,	17,019	31,624	8,505	4,743	(a)	3,984	65,875
Pickles	pints	2,413	2,057	439	536	160	18	5,623
Sauces	,,	5,976	7,894	1,001	3,402	179	31	18,483
VALUE.								
Jams	£	485,553	658,348	99,530	184,220	(a)	308,773	1,736,424
Pulp	£	22,543	113,135	3,546	27,570	(a)	91,751	258,545
Fruit, preserved ..	£	407,951	758,064	163,511	93,571	(a)	88,638	1,511,735
Pickles	£	76,604	65,320	16,501	20,174	5,514	900	185,013
Sauces	£	339,115	447,973	21,117	125,171	5,678	1,150	940,204

(a) Particulars not available. (b) Year ended 31st December, 1924.

15. Confectionery Factories.—(i) *Details for each State, 1924–25.* The growth of this industry will be apparent when it is stated that at the close of 1900 there were in New South Wales only 16 establishments, with 706 employees, and in Victoria 16 establishments, employing 731 persons, the plant and machinery in the former State being valued at £2,815, and in the latter at £19,070. Returns for 1924–25 are given hereunder :—

CONFECTIONERY FACTORIES, 1924–25.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tas. (b)	Australia.
Number of factories	99	117	13	22	15	10	276
Number of employees	2,907	3,787	637	459	339	689	8,818
Actual horse-power of engines employed	3,700	6,766	317	484	332	1,126	12,725
Approximate value of land and buildings .. .. £	955,311	611,255	72,314	74,235	62,459	245,865	2,021,439
Approximate value of plant and machinery .. .. £	880,227	894,075	52,753	75,585	52,637	148,931	2,104,208
Total amount of wages paid during year .. .. £	419,344	637,363	89,510	56,811	39,192	107,497	1,349,717
Value of fuel used .. £	47,160	84,139	3,374	7,191	3,872	9,314	155,050
Value of raw material worked up £	1,280,069	1,757,052	107,646	166,636	122,793	184,809	3,619,005
Total value of output .. £	2,437,771	3,054,726	329,145	288,307	181,082	332,797	6,623,828
Value added in process of manufacture .. .. £	1,110,542	1,213,535	218,125	114,480	54,417	138,674	2,849,773

(a) Year ended 31st December, 1924. (b) Including Biscuits.

(ii) *Development in Australia, 1920–21 to 1924–25.* The growth of the confectionery industry during the past four years is exhibited in the following table :—

CONFECTIONERY FACTORIES.—AUSTRALIA, 1920–21 TO 1924–25.

Items.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25. (a)
Number of factories	..	200	223	258	258	276
Number of employees	..	7,137	7,399	7,945	8,724	8,818
Actual horse-power of engines employed	..	4,862	5,313	6,434	11,668	12,725
Approx. value of land and buildings	£	1,041,380	1,185,539	1,593,346	1,773,340	2,021,439
Approx. value of plant and machinery	£	1,278,882	1,419,984	1,746,738	1,951,422	2,104,208
Total amount of wages paid during year	£	937,536	1,046,797	1,159,980	1,262,099	1,349,717
Value of fuel used	£	93,975	105,479	114,947	126,547	155,050
Value of raw material worked up	£	3,421,474	3,220,680	3,336,349	3,318,428	3,619,005
Total value of output	£	5,419,985	5,597,920	5,941,691	6,162,631	6,623,828
Value added in process of manufacture	£	1,904,536	2,271,761	2,490,395	2,717,656	2,849,773

(a) Including Biscuits in Tasmania.

The confectionery industry has expanded considerably during recent years, largely as a result of the stimulus afforded by the embargo placed on the importation of luxuries during the period of the war. The establishments engaged therein found employment for 8,818 persons in 1924–25, and the value of the output amounted to £6,623,828, or more than 22 per cent. greater than the value of the production in 1920–21. The Australian market has been captured, and an export trade is being developed. Several large British manufacturers of confectionery have established branch works in Australia.

16. **Flour Mills.**—(i) *Details for States, 1924–25.* The following table shows the position of the flour-milling industry in each State in 1924–25 :—

FLOUR MILLS, 1924–25.

Items.	N.S.W.	Victoria.	Q'land. (*a*)	S. Aust. (*a*)	W. Aust. (*b*)	Tas. (*a*)	Australia.
Number of factories ..	58	46	12	36	18	11	181
Number of employees ..	1,181	1,064	311	519	453	116	3,644
Actual horse-power of engines employed	6,868	5,363	1,352	3,029	2,986	428	20,026
Approximate value of land and buildings .. £	676,378	338,605	132,827	170,126	169,773	41,470	1,529,179
Approximate value of plant and machinery .. £	836,493	487,990	165,925	256,905	218,768	30,155	1,996,236
Total amount of wages paid during year .. £	285,510	257,583	66,565	109,135	96,287	23,584	838,664
Value of fuel used .. £	65,174	58,196	9,472	28,678	19,162	2,866	183,548
Value of raw material worked up .. .. £	5,290,904	5,371,466	806,120	1,715,355	1,441,326	322,736	14,947,907
Total value of output £	6,260,197	6,218,248	1,044,603	1,988,828	1,829,667	385,849	17,727,392
Value added in process of manufacture .. .. £	904,119	788,586	229,011	244,795	369,179	60,247	2,595,937

(*a*) The manufacture of cornflour, oatmeal, etc., was also carried on in some of these establishments.
(*b*) Year ended 31st December, 1924.

(ii) *Production of Flour and By-products, 1920–21 to 1924–25.* The production of flour by the mills in each State for the years 1920–21 to 1924–25 was as follows :—

FLOUR MILLS.—PRODUCTION OF FLOUR, 1920–21 TO 1924–25.

Year (*b*).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	Tons.*a*	Tons.*a*	Tons.*a*	Tons.*a*	Tons.*a*	Tons.*a*	Tons.*a*
1920–21 ..	244,818	260,032	54,383	98,557	120,125	23,596	801,511
1921–22 ..	336,572	308,532	54,694	108,893	82,148	20,613	911,452
1922–23 ..	354,704	352,002	51,476	109,761	94,316	23,220	985,479
1923–24 ..	409,645	382,204	54,244	113,436	107,990	25,337	1,092,856
1924–25 ..	395,409	359,597	52,592	117,042	122,192	21,866	1,068,698

(*a*) Tons of 2,000 lbs. (*b*) See general note on first page of this Chapter.

The total production of flour in Australia for the last year, viz., 1,068,698 tons, was valued at £13,884,581. In addition, 442,472 tons of bran and pollard, valued at £2,902,704, were made. The total quantity of wheat ground was 50,805,093 bushels.

17. **Sugar Mills.**—(i) *Details for 1924–25.* The following table shows the position of the cane-crushing branch of the sugar-making industry in Queensland and New South Wales in 1924–25. Sugar-cane is not grown in the other States. Details regarding the area, yield, etc., of sugar-cane will be found in Chapter XVII., "Agricultural Production."

SUGAR MILLS, 1924–25.

Items.		N.S.W.	Queensland.	Australia.
Number of factories		3	37	40
Number of employees		445	6,250	6,695
Actual horse-power of engines employed ..		2,028	25,144	27,172
Approximate value of land and buildings	£	119,505	774,468	893,973
Approximate value of plant and machinery	£	478,020	4,433,542	4,911,562
Total amount of wages paid during year ..	£	99,737	1,414,026	1,513,763
Value of fuel used	£	16,611	161,346	177,957
Value of raw material worked up ..	£	476,062	8,478,513	8,954,575
Total value of output	£	754,191	11,005,855	11,760,046
Value added in course of manufacture ..	£	261,518	2,365,996	2,627,514

The products of the sugar mill are raw sugar and molasses, the former being sent to the refineries in different parts of Australia for further treatment. Part of the molasses produced is used for distillation, part is prepared for human consumption, part is turned into food-cake for cattle, and part is used for manuring land, but a considerable quantity is allowed to run to waste.

(ii) *Progress of Industry.* (*a*) *New South Wales.* The following table shows the progress of this industry in New South Wales since 1920–21 :—

SUGAR MILLS.—NEW SOUTH WALES, 1920–21 TO 1924–25.

Items.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of factories ..		3	3	3	3	3
Number of employees ..		437	428	446	445	445
Cane crushed ..	tons	131,313	149,474	147,992	132,084	228,978
Sugar produced ..	tons	15,124	17,806	18,580	16,829	26,682
Molasses produced	gals.	649,800	940,700	816,720	752,650	1,313,400

The number of New South Wales mills has been reduced to three during recent years owing chiefly to the tendency towards concentration of cane-crushing in mills fitted with modern machinery, and the consequent closing of the small home mill. On the north coast of New South Wales some land formerly devoted to sugar-cane has been turned into pasture in connexion with the dairying industry, but a revival in cane-growing in this district has led to a movement for the erection of additional mills to treat the increased production.

(*b*) *Queensland.* Details for Queensland from 1911 onwards are given hereunder.

SUGAR MILLS.—QUEENSLAND, 1911 TO 1924.

Items.		1911.	1921.	1922.	1923.	1924.
Number of factories ..		49	43	38	37	37
Number of employees ..		4,295	6,091	5,589	5,555	6,250
Cane crushed ..	tons	1,534,451	2,287,416	2,167,990	2,045,808	3,175,377
Sugar produced ..	tons	173,296	282,198	287,785	269,175	400,645
Molasses—						
Sold to distillers and others ..	gals.	2,393,669	2,738,795	1,774,224	2,657,252	5,367,352
Used as fodder..	gals.	789,564	2,053,338	1,916,393	2,448,595	2,236,788
Used as manure	gals.	223,000	78,720	322,113	209,600	196,080
Run to waste or burnt (*a*)	gals.	1,847,333	4,866,272	5,503,099	4,883,071	5,921,246
In Stock ..	gals.	1,197,626	997,274	803,050	866,460	1,398,837
Total Molasses *a* ..	gals.	6,451,192	10,734,399	10,318,879	11,064,978	15,120,303

(*a*) Quantity recorded ; large quantities run to waste of which no record is kept.

18. **Sugar Refineries.**—The establishment of the sugar-refining industry considerably antedates the establishment of the sugar-milling industry, the raw material operated upon being originally brought chiefly from Mauritius and the East. In 1924–25 there were two sugar refineries in each of the States of Victoria and Queensland, and one in each of the States of New South Wales and South Australia. The returns for the individual States cannot be disclosed.

In the six refineries, an average number of 1,620 hands was employed during the year. The approximate value of land and buildings was £741,605, of plant and machinery, £1,415,410; and the total amount of wages paid during the year was £385,829. The value of all materials used in sugar refineries was £9,692,768, while the total output reached £11,366,270. The amount of crude sugar used was 319,636 tons, and of refined sugar produced 308,601 tons, valued at £11,131,595.

19. **Breweries.**—(i) *Details for each State, 1924–25.* The following table gives particulars concerning breweries in each State :—

BREWERIES, 1924–25.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (a), (b)	Tas.	Australia.
Number of breweries	13	14	9	7	11	2	56
Number of employees	1,235	1,263	534	360	471	102	3,965
Actual horse-power of engines employed	3,502	5,204	1,785	1,093	1,582	237	13,403
Approximate value of land and buildings .. .. £	801,409	568,335	214,669	108,650	248,081	55,500	1,996,644
Approximate value of plant and machinery .. .. £	1,121,200	722,440	224,103	152,586	234,953	51,002	2,506,284
Total amount of wages paid during year .. £	352,157	342,569	135,914	108,942	126,455	27,286	1,093.323
Value of fuel used .. £	94,267	80,406	18,906	20,882	18,433	9,024	241,918
Value of raw material worked up £	1,130,651	1,091,574	180,239	295,788	247,070	74,270	3,019,592
Total value of output .. £	2,655,195	2,479,619	666,234	563,474	563,971	188,536	7,117,029
Value added in process of manufacture .. £	1,430,277	1,307,639	467,089	246,804	298,468	105,242	3,855,519

(*a*) Includes malting. (*b*) Year ended 31st December, 1924.

(ii) *Development in Australia, 1920–21 to 1924–25.* The following table shows the progress of this industry during the past four years :—

BREWERIES.—AUSTRALIA, 1920–21 TO 1924–25.

Items.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of breweries	67	64	61	57	56
Number of employees	3,752	3,814	3,774	3,854	3,965
Actual horse-power of engines used ..	10,833	12,132	11,492	12,761	13,403
Approx. value of land and buildings £	1,619,027	1,676,471	1,710,321	1,778,442	1,996,644
Approx. value of plant and machinery £	1,882,956	1,993,699	2,140,654	2,247,811	2,506,284
Total amount of wages paid .. £	937,563	1,032,430	1,027,689	1,063,250	1,093,323
Value of fuel used .. .. £	195,135	214,803	194,324	197,596	241,918
Value of raw material worked up .. £	3,341,707	3,087,460	2,913,409	2,787,891	3,019,592
Value of final output .. .. £	6,991,770	6,798,223	6,872,682	6,887,462	7,117,029
Value added in process of manufacture £	3,454,928	3,495,960	3,764,949	3,901,975	3,855,519

The main feature in the history of the brewing industry, which was established at an early date in Australia, has been the change from the small local brewery in every township of moderate size to the large centralized city brewery. This, however, has not been so much in evidence during the period embraced in the above table, the reduction of the number of establishments during recent years being mainly due to amalgamations. The total value of output of breweries in Australia increased from £6,991,770 in 1920–21 to £7,117,029 in 1924–25, but the increase was wholly due to higher prices, for the quantity of ale and stout brewed decreased during the period, the respective totals for the years 1920–1921 and 1924–25 being 70,235,740 and 67,188,370 gallons. The consumption of ale and stout per head of the population declined slightly in Australia during the past four years, and for 1924–25 the quantity consumed amounted to about 11 gallons.

(iii) *Materials Used and Production.* The table below shows the quantity of raw materials used and the quantity and value of ale and stout brewed in each State during the year 1924–25.

BREWERIES.—MATERIALS USED AND PRODUCTION, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.*b*	Tasmania.	Australia.
RAW MATERIALS USED.							
Malt .. bushels	850,326	744,048	209,995	170,088	164,867	53,899	2,193,223
Hops .. lb.	813,957	784,080	209,504	183,916	177,977	76,295	2,245,729
Sugar .. cwt.	107,462	113,729	25,125	25,612	25,709	5,679	303,316
RAW MATERIALS USED PER 1,000 GALLONS OF ALE AND STOUT PRODUCED.							
Malt .. bushels	34.68	30.88	32.36	30.73	31.73	39.61	32.64
Hops .. lb.	32.20	32.54	32.29	33.23	34.25	56.07	33.42
Sugar .. cwt.	4.38	4.72	3.87	4.63	4.95	4.17	4.51
ALE AND STOUT BREWED.							
Quantity gallons	24,519,876	24,089,435	6,488,405	5,533,982	5,195,998	1,360,674	67,188,370
Value(*a*) £	2,622,583	2,479,619	666,234	558,689	559,490	188,368	7,074,983

(*a*) Exclusive of excise duty. (*b*) Year ended 31st December, 1924.

20. **Distilleries.**—The subjoined table gives particulars of distilleries in four States. There are no distilleries in Western Australia or Tasmania.

DISTILLERIES, 1924–25.

Items.		N.S.W.	Vic.	Q'land.	S. Aust.	Australia.
Number of distilleries	..	4	10	4	27	45
Number of employees	..	42	117	76	180	415
Actual horse-power of engines employed	..	251	572	243	485	1,551
Approx. value of land and buildings ..	£	24,033	132,395	41,571	152,860	350,859
Approx. value of plant and machinery	£	68,071	144,195	108,350	153,767	474,383
Total amount of wages paid during year	£	11,928	28,333	16,678	32,316	89,255
Value of fuel used	£	6,369	8,987	7,919	14,886	38,161
Value of raw materials worked up ..	£	102,092	55,085	33,203	206,607	396,987
Total value of output	£	146,807	120,655	103,458	315,274	695,194
Value added in process of manufacture	£	38,346	65,583	62,336	93,781	260,046

The total quantity of spirit distilled during the year was 5,473,347 proof gallons, while the materials used comprised 787,279 cwt. of molasses, 94,866 bushels of malt, and 7,322,152 gallons of wine.

21. **Tobacco, etc., Factories.**—(i) *Details for each State, 1924–25.* During the year 1924–25 there were twenty-seven establishments in which the manufacture of tobacco, cigars, and cigarettes was carried on. There were no factories engaged in this industry in Queensland or Tasmania.

TOBACCO, CIGAR, AND CIGARETTE FACTORIES, 1924-25.

Items.	N.S.W.	Victoria.	S. Aust.	W. Aust. (c)	Australia.
Number of factories	10	13	1	3	27
Number of employees	2,454	1,818	26	123	4,421
Actual horse-power and engines employed	931	711	..	34	1,676
Approx. value of land and buildings £	369,827	235,985	(a)	(a)	b 620,694
Approx. value of plant and machinery £	316,894	169,970	(a)	(a)	b 497,034
Total amount of wages paid during year £	423,051	343,005	(a)	(a)	b 781,471
Value of fuel used £	20,356	6,483	(a)	(a)	b 27,172
Value of raw material worked up £	3,264,793	1,326,182	(a)	(a)	b4,613,357
Total value of output £	4,662,652	2,200,459	(a)	(a)	b6,927,087
Value added in process of manufacture £	1,377,503	867,794	(a)	(a)	b2,286,558

(a) Not available for publication. (b) Including South Australia and Western Australia.
(c) Year ended 31st December, 1924.

(ii) *Development in Australia.* This industry was among the first to be established in Australia. In 1861 New South Wales had eleven factories, producing 177,744 lb. of manufactured tobacco; in the same year there was one factory in Victoria, but the quantity of tobacco manufactured is not available. The Australian market has for many years been largely supplied with local manufactures. The imports into Australia during 1924-25 comprised—manufactured tobacco 645,020 lb., cigars 97,789 lb., and cigarettes 328,503 lb., while the quantities manufactured in Australian factories were respectively 14,978,410 lb., 470,330 lb., and 4,872,711 lb. The following tables show the development of the tobacco manufacturing industry in Australia during recent years:—

TOBACCO, CIGAR, AND CIGARETTE FACTORIES.—AUSTRALIA, 1920-21 TO 1924-25.

Items.	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.
Number of factories	40	36	29	28	27
Number of employees	4,525	4,340	4,319	4,312	4,421
Actual horse-power of engines used	1,186	1,203	1,466	1,609	1,676
Approx. value of land and buildings £	490,494	490,414	493,597	531,273	620,694
Approx. value of plant and machinery £	369,267	413,119	427,825	478,477	497,034
Total amount of wages paid £	706,218	724,919	734,070	742,697	781,471
Value of fuel used £	18,201	20,354	20,612	18,954	27,172
Value of raw material worked up £	5,091,272	4,925,066	4,603,218	4,500,304	4,613,357
Value of final output £	6,709,298	6,710,757	6,690,701	6,645,451	6,927,087
Value added in process of manufacture £	1,599,825	1,765,337	2,066,871	2,126,193	2,286,558

LEAF USED AND PRODUCTION.

Leaf used .. 1,000 lb.	16,636	16,867	17,104	17,104	18,073
Tobacco made .. ,,	13,268	14,216	14,636	14,145	14,978
Cigars .. ,,	544	508	483	431	470
Cigarettes .. ,,	5,324	4,907	4,384	4,794	4,873

Although the manufacturing side of the tobacco industry is so firmly established in Australia, the production of locally-grown leaf is comparatively small, and manufacturers are dependent on imported leaf for the supply of their raw material. The respective quantities of Australian and imported leaf used during 1924-25 were 1,066,763 and 17,006,274 lb.

22. **Woollen, Cotton, and Tweed Mills.**—(i) *Details for each State, 1924-25.* The manufacture of woollens and tweeds was established in Australia at an early period in its history, and was under Government control, the first record in New South Wales dating back to 1801, when a few blankets were made by the convicts; the first record

in Victoria was in 1867. A woollen mill was recently established at Albany in Western Australia, and the results of its operations will be included in the returns for 1925–26. The following table, which gives particulars for 1924–25, shows that the industry is now well established :—

WOOLLEN AND TWEED MILLS, 1924–25.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.A. (c)	Tas.	Australia.
Number of factories	12	28	2	2	. .	5	49
Number of employees	1,785	5,077	275	204	. .	600	7,941
Actual horse-power of engines employed	3,180	10,778	690	420	. .	1,242	16,310
Approx. value of land and buildings £	333,129	1,013,350	(a)	(a)		225,095	b 1,620,318
Approx. value of plant and machinery . . . . £	645,941	2,233,395	(a)	(a)	. .	293,535	b 3,297,229
Total amount of wages paid during year . . . . £	258,194	717,568	(a)	(a)	. .	65,129	b 1,102,718
Value of fuel used . . £	32,785	103,532	(a)	(a)	. .	21,110	b 165,724
Value of raw material worked up £	649,589	2,214,423	(a)	(a)	. .	203,680	b 3,197,778
Total value of output . . £	1,083,977	3,433,231	(a)	(a)	. .	325,944	b 5,071,124
Value added in process of manufacture . . . . £	401,603	1,115,276	(a)	(a)	. .	101,154	b 1,707,622

(a) Information not available for publication.
(b) Including Queensland and South Australia.
(c) Year ended 31st December, 1924.

(ii) *Development in Australia, 1920–21 to 1924–25.* The progress of woollen and tweed milling in Australia during the last four years is shown in the following table :—

WOOLLEN AND TWEED MILLS.—AUSTRALIA, 1920–21 TO 1924–25.

Items.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of factories	. .	34	36	40	47	49
Number of employees	. .	5,783	6,101	6,928	7,532	7,941
Actual horse-power of engines used	. .	9,617	11,630	12,347	15,406	16,310
Approx. value of land and buildings	£	751,858	940,578	1,131,396	1,426,493	1,620,318
Approx. value of plant and machinery	£	1,378,903	1,849,919	2,428,133	3,043,586	3,297,229
Total amount of wages paid . .	£	762,131	842,683	991,801	1,043,298	1,102,718
Value of fuel used	£	93,691	109,514	127,573	128,487	165,724
Value of raw material worked up . .	£	2,090,892	1,940,050	2,511,204	2,824,176	3,197,778
Value of annual output . .	£	4,241,964	4,096,808	4,712,964	4,863,657	5,071,124
Value added in process of manufacture	£	2,057,381	2,047,244	2,074,187	1,910,994	1,707,622

(iii) *Quantity and Value of Production.* The production consists chiefly of tweed cloths, flannels, rugs, blankets and yarn, all of which have acquired a reputation for purity and durability. Detailed particulars for the several States are not available for publication. The total length of tweed and cloth manufactured in Australia during 1924–25 was 4,131,991 yards. In New South Wales 1,884,218 yards of tweed and cloth, and in Victoria 1,898,647 yards were manufactured. The production of flannel amounted to 6,035,901 yards, while blankets, shawls, and rugs to the number of 1,139,376 were manufactured. The output of yarn reported was 3,339,651 lb., most of which was produced in Victoria.

In addition to the woollen and tweed factories, there were 252 hosiery and knitting mills operating throughout Australia during 1924–25. These establishments provided employment for 7,197 persons, of whom 6,033 were females, and the value of their output amounted to £3,785,168.

Cotton ginning has been carried on intermittently in the Northern States, and the recent development in cotton growing has led to the establishment of modern ginning plants at convenient centres in Queensland. In New South Wales during 1923–24 the first up-to-date mill for the manufacture of cotton goods was erected. There were eight establishments treating cotton in Australia during 1924–25, and these employed 562 hands, while the value of the output was £562,329.

23. **Boot Factories.**—(i) *Details for each State, 1924–25.* Among the manufactories of Australia the boot and shoe industry holds an important place in regard to employment afforded and extent of output. The following table gives particulars of this industry for each State during 1924–25 :—

BOOT AND SHOE FACTORIES, 1924–25.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories	603	430	32	69	26	12	1,172
Number of employees	6,164	12,099	1,378	866	466	247	21,220
Actual horse-power of engines employed	2,219	3,249	341	341	193	84	6,427
Approx. value of land and buildings .. .. £	1,249,007	1,142,870	74,375	125,237	65,332	19,704	2,676,525
Approx. value of plant and machinery .. £	345,134	605,945	43,870	50,919	23,939	9,672	1,079,479
Total amount of wages paid during year .. .. £	920,816	1,886,118	202,279	122,168	65,322	39,174	3,235,877
Value of fuel used .. £	17,897	41,029	2,325	3,221	1,100	388	65,960
Value of raw material worked up £	1,320,852	2,943,105	306,403	161,681	125,365	50,854	4,908,260
Total value of output £	2,787,375	5,832,625	550,422	332,969	199,569	108,262	9,811,222
Value added in process of manufacture .. .. £	1,448,626	2,848,491	241,694	168,067	73,104	57,020	4,837,002

(*a*) Year ended 31st December, 1924.

(ii) *Development in Australia, 1920–21 to 1924–25.* The progress of the industry in the last four years is shown in the following table :—

BOOT AND SHOE FACTORIES.—AUSTRALIA, 1920–21 TO 1924–25.

Items.		1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of factories	..	592	744	896	1,030	1,172
Number of employees	..	16,573	20,390	21,487	21,464	21,220
Actual horse-power of engines used	..	4,746	5,130	5,837	6,281	6,427
Approx. value of land and buildings	£	1,258,361	1,612,781	1,975,873	2,317,210	2,676,525
Approx. value of plant and machinery	£	617,721	711,449	881,298	998,200	1,079,479
Total amount of wages paid ..	£	2,198,586	3,050,125	3,302,811	3,295,088	3,235,877
Value of fuel used	£	41,077	49,244	56,636	61,504	65,960
Value of raw material worked up ..	£	5,208,627	5,291,027	5,263,889	4,838,929	4,908,260
Value of final output	£	8,895,411	10,241,279	10,486,294	9,899,903	9,811,222
Value added in process of manufacture	£	3,645,707	4,901,068	5,165,769	4,999,470	4,837,002

The inclusion of boot-repairing establishments in the returns is largely responsible for the increases recorded in the numbers of factories and hands employed in boot factories during the past four years. The output of boots and shoes is increasing, and the production of slippers rose from 1,140,632 pairs to 1,919,021 pairs during the period.

(iii) *Quantity and Value of Production.* The number and value of boots, shoes, and slippers made at factories in each State are shown in the following table :—

BOOT AND SHOE FACTORIES.—OUTPUT, 1924–25.

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (b)	Tas.	Australia.
QUANTITY (,000 OMITTED).								
Boots and shoes ..	pairs	3,715	7,496	776	463	345	156	12,951
Slippers	,,	636	1,167	19	18	73	6	1,919
Uppers (*a*) ..	,,	39	16	3	9	2	3	72
VALUE.								
Boots and shoes ..	£	2,164,184	4,366,600	501,352	212,355	169,242	100,318	7,514,051
Slippers ..	£	120,960	222,190	5,903	5,181	4,862	2,715	361,811
Uppers (*a*) ..	£	13,575	5,550	1,529	3,485	1,161	1,095	26,395

(*a*) Made for other than factory use. (*b*) Year ended 31st December, 1924.

24. Clothing (Tailoring and Slop) Factories.—(i) *Details for each State, 1924–25.* The importance of this industry in the several States is shown in the following table :—

CLOTHING (TAILORING AND SLOP) FACTORIES, 1924–25.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories	530	534	145	150	73	40	1,472
Number of employees.. ..	11,015	9,853	3,306	2,506	1,362	558	28,600
Actual horse-power of engines employed	699	608	256	115	113	32	1,823
Approximate value of land and buildings .. .. £	1,941,157	1,343,325	366,476	351,944	191,540	97,239	4,291,681
Approximate value of plant and machinery .. £	141,031	123,085	56,598	28,523	16,241	8,601	374,079
Total amount of wages paid during year .. .. £	1,393,508	1,212,870	369,302	285,811	157,327	63,618	3,482,436
Value of fuel used .. £	19,956	22,778	5,746	6,568	2,646	1,249	58,943
Value of raw material worked up £	1,959,552	2,085,605	615,310	417,622	265,870	63,717	5,407,676
Total value of output £	4,170,060	3,965,405	1,233,755	854,769	492,167	165,528	10,881,684
Value added in process of manufacture .. .. £	2,190,552	1,857,022	612,699	430,579	223,651	100,562	5,415,065

(a) Year ended 31st December, 1924.

(ii) *Development in Australia, 1920–21 to 1924–25.* The development in the tailoring and slop branch of the clothing industry during the past four years, despite the high range of prices, may be accepted as an indication of the general prosperity of the community. The number of employees rose by 2,797, and increases were recorded in the power used and the capital invested in land, buildings, plant and machinery. It is not possible to measure the growth of the output owing to price fluctuations. Employment in this industry is, however, nearly 2,000 less than the highest pre-war figure. Details for the past five years are as follows :—

CLOTHING (TAILORING AND SLOP) FACTORIES.—AUSTRALIA, 1920–21 TO 1924–25.

Items.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of factories	1,272	1,379	1,418	1,440	1,472
Number of employees	25,803	27,616	28,822	28,148	28,600
Actual horse-power of engines used ..	1,408	1,386	1,617	1,655	1,823
Approx. value of land and buildings £	2,753,171	3,230,794	3,445,473	3,899,477	4,291,681
Approx. value of plant and machinery £	263,067	290,453	328,347	358,603	374,079
Total amount of wages paid .. £	2,859,971	3,189,402	3,370,258	3,402,069	3,482,436
Value of fuel used .. .. £	44,042	49,525	56,194	56,492	58,943
Value of raw material worked up.. £	6,020,891	5,978,992	5,521,496	5,257,702	5,407,676
Total value of output .. .. £	10,679,919	10,782,182	10,719,900	10,527,577	10,881,684
Value added in process of manufacture £	4,614,986	4,753,665	5,142,210	5,213,383	5,415,065

25. Dressmaking and Millinery Establishments.—(i) *Details for each State, 1924–25.* Particulars of dressmaking and millinery establishments are given in the following table :—

DRESSMAKING AND MILLINERY ESTABLISHMENTS, 1924–25.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories	256	492	48	48	56	22	922
Number of employees ..	3,750	8,339	810	980	709	235	14,823
Actual horse-power of engines employed	147	473	10	24	39	6	699
Approximate value of land and buildings .. .. £	876,843	1,138,265	55,375	95,127	87,848	17,519	2,270,977
Approximate value of plant and machinery .. £	41,451	103,145	4,732	7,900	7,469	1,405	166,102
Total amount of wages paid during year .. .. £	342,137	808,148	67,129	85,894	62,994	16,836	1,383,138
Value of fuel used .. £	3,658	12,895	356	1,201	582	350	19,042
Value of raw material worked up £	549,962	1,716,614	127,620	131,682	103,582	19,355	2,648,815
Total value of output £	1,167,015	3,047,653	213,247	274,080	175,999	42,656	4,920,650
Value added in process of manufacture .. .. £	613,395	1,318,144	85,271	141,197	71,835	22,951	2,252,793

(a) Year ended 31st December, 1924.

(ii) *Development in Australia, 1920–21 to 1924–25.* The development of dressmaking and millinery establishments in Australia during the past four years is shown in the following table :—

DRESSMAKING AND MILLINERY ESTABLISHMENTS.—AUSTRALIA, 1920–21 TO 1924–25.

Items.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of factories	860	910	922	926	922
Number of employees	16,856	16,572	16,213	15,623	14,823
Actual horse-power of engines used ..	673	709	693	701	699
Approximate value of land and buildings £	1,392,868	1,579,428	1,732,865	2,047,288	2,270,977
Approximate value of plant and machinery £	150,475	146,814	150,242	155,011	166,102
Total amount of wages paid .. £	1,350,596	1,467,066	1,435,885	1,448,046	1,383,138
Value of fuel used .. .. £	15,864	17,207	18,252	18,680	19,042
Value of raw material worked up £	2,782,042	2,695,834	2,514,140	2,658,051	2,648,815
Value of final output .. .. £	4,951,519	5,000,412	4,815,441	4,999,412	4,920,650
Value added in process of manufacture £	2,153,613	2,287,371	2,283,049	2,322,681	2,252,793

26. Electrotyping, Stereotyping, Printing, and Binding Works.—(i) *Details for each State, 1924–25.* Printing ranks high in importance among the industries of Australia. It affords employment for more than 25,000 employees, and pays nearly £6,000,000 in salaries and wages. During 1924–25 the total value of the output amounted to £13,621,903.

The following table gives particulars of these industries in each State for the year 1924–25 :—

ELECTROTYPING, STEREOTYPING, PRINTING, AND BINDING ESTABLISHMENTS, 1924–25.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories	487	431	129	89	81	21	1,238
Number of employees ..	9,747	8,073	3,561	1,829	1,357	712	25,279
Actual horse-power of engines employed	6,956	6,137	1,902	1,548	1,216	444	18,203
Approximate value of land and buildings .. .. £	2,454,481	1,777,475	636,658	442,700	299,580	98,527	5,709,421
Approximate value of plant and machinery .. £	2,488,611	1,857,145	520,505	325,323	302,297	130,606	5,624,487
Total amount of wages paid during year .. £	1,992,977	1,695,194	743,523	351,126	294,816	154,404	5,232,040
Value of fuel used .. £	63,375	50,570	23,985	13,782	8,382	4,952	165,046
Value of raw materials worked up .. .. £	2,101,519	1,681,452	488,233	323,409	218,582	91,341	4,904,536
Total value of output £	5,426,183	4,433,726	1,694,591	936,139	819,762	311,502	13,621,903
Value added in process of manufacture .. £	3,261,289	2,701,704	1,182,373	598,948	592.798	215,209	8,552,321

(a) Year ended 31st December, 1924.

(ii) *Development in Australia, 1920–21 to 1924–25.* The development of electrotyping stereotyping, printing, and binding in Australia since 1920–21 is shown in the following table :—

ELECTROTYPING, STEREOTYPING, PRINTING AND BINDING ESTABLISHMENTS. AUSTRALIA, 1920–21 TO 1924–25.

Items.	1920–21.	1921–22.	1922–23.	1923–24.	1924–25.
Number of establishments	1,132	1,175	1,203	1,194	1,238
Number of employees	23,053	23,992	25,857	25,162	25,279
Actual horse-power of engines used ..	12,534	13,257	15,262	17,225	18,203
Approximate value of land and buildings £	3,976,321	4,219,547	5,134,668	5,260,806	5,709,421
Approximate value of plant and machinery £	3,392,044	3,849,895	4,613,369	5,132,411	5,624,487
Total amount of wages paid .. £	4,083,732	4,557,165	5,182,861	5,253,593	5,232,040
Value of fuel used .. .. £	126,657	135,188	146,889	148,927	165,046
Value of raw materials worked up £	6,526,081	6,434,932	5,658,994	4,879,459	4,904,536
Value of final output .. .. £	13,845,574	14,408,689	15,382,659	14,577,413	13,621,903
Value added in process of manufacture £	7,192,836	7,838,569	9,576,776	9,549,027	8,552,321

Since 1920–21 the expansion in this industry has necessitated the employment of 2,000 additional workers and nearly 6,000 extra horse-power units, while the salaries bill increased by more than £1,000,000. Fluctuations in prices obscure the actual development, but the value added in process of manufacture increased from £7,192,836 to £8,552,321.

27. **Coach and Wagon Building Works.**—This industry forms one of the principal branches of manufacture in Class XI. Particulars of the operations of these establishments in 1924–25 are given in the subjoined table :—

COACH AND WAGON BUILDING WORKS, 1924–25.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
Number of factories	204	286	52	69	45	24	680
Number of employees ..	1,198	2,575	356	560	315	212	5,216
Actual horse-power of engines employed	759	1,287	257	466	177	99	3,045
Approximate value of land and buildings .. .. £	294,226	403,960	60,165	86,930	44,218	34,460	923,959
Approximate value of plant and machinery .. £	75,935	121,105	16,383	26,781	15,877	7,461	263,542
Total amount of wages paid during year .. £	189,203	465,510	50,480	85,147	48,971	29,192	868,503
Value of fuel used .. £	10,949	15,110	1,489	7,486	4,126	1,490	40,650
Value of raw material worked up £	205,734	455,815	65,966	116,443	60,366	28,943	933,267
Total value of output £	526,328	1,152,252	150,980	250,476	142,548	82,717	2,305,301
Value added in process of manufacture .. .. £	309,645	681,327	83,525	126,547	78,056	52,284	1,331,384

(*a*) Year ended 31st December, 1924.

28. **Cycle and Motor Works.**—This industry has made rapid grogress in recent years owing to the increasing use of motor-propelled vehicles. The imposition of a heavy tariff duty on imported bodies has had the effect of establishing a local body-building industry, and the majority of cars now purchased in Australia are fitted with locally-made bodies. The classification of the various branches of this industry is not uniform in the States, consequently combined results are given in the following table. An endeavour is being made to obtain separate particulars in respect of motor-repairing and assembling, motor-body building and repairing, and motor cycle and bicycle building and repairing.

CYCLE AND MOTOR WORKS, 1924–25.

Item.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
Number of factories	675	505	82	124	76	34	1,496
Number of employees ..	6,354	3,867	1,585	4,436	680	313	17,235
Actual horse-power of engines employed	3,266	1,768	490	3,496	338	135	9,493
Approximate value of land and buildings .. £	2,447,985	1,041,180	331,487	690,333	240,052	109,206	4,860,243
Approximate value of plant and machinery .. £	470,833	268,320	60,065	311,900	40,040	16,503	1,167,661
Total amount of wages paid during year .. £	1,160,130	681,319	253,513	838,913	112,663	58,528	3,105,066
Value of fuel used .. £	35,217	25,016	5,093	23,959	2,744	1,487	93,516
Value of raw material worked up .. .. £	978,577	483,711	361,312	1,250,169	271,788	16,740	3,362,297
Total value of output £	2,732,272	1,625,386	1,402,173	2,464,705	451,522	91,087	8,767,145
Value added in process of manufacture .. .. £	1,718,478	1,116,659	1,035,768	1,190,577	176,990	72,860	5,311,332

(*a*) Year ended 31st December, 1924.

29. **Furniture and Cabinet Making and Billiard Table Making Factories.**—These industries constitute the principal manufactures in Class XIII. The following table gives particulars for each State :—

FURNITURE AND CABINET MAKING AND BILLIARD TABLE MAKING FACTORIES, 1924–25.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories	259	326	79	53	40	25	782
Number of employees ..	3,741	3,528	1,274	984	577	257	10,361
Actual horse-power of engines employed	3,239	2,718	1,280	1,052	596	394	9,279
Approximate value of land and buildings .. .. £	682,346	666,825	154,629	103,721	101,048	32,795	1,741,364
Approximate value of plant and machinery .. £	205,890	162,790	66,949	47,460	28,255	21,235	532,579
Total amount of wages paid during year .. .. £	685,849	611,226	233,864	174,034	115,411	41,460	1,861,844
Value of fuel used .. £	16,287	19,003	6,233	5,371	2,524	1,117	50,535
Value of raw material used £	1,006,443	759,262	325,442	191,443	135,320	28,808	2,446,718
Total value of output £	2,051,307	1,767,538	675,322	458,340	283,825	95,386	5,331,718
Value added in process of manufacture .. .. £	1,028,577	989,273	343,647	261,526	145,981	65,461	2,834,465

(a) Year ended 31st December, 1924.

30. Electric Light and Power Works.—Particulars of the electric light and power works of Australia are given in the subjoined table. In 1920–21 there were 260 establishments employing 4,044 hands; in 1924–25 the figures had increased to 298 establishments and 6,075 hands, while the production of electric light and power rose during the four years from 647,938,875 to 1,536,853,348 British units.

ELECTRIC LIGHT AND POWER WORKS, 1924–25.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories	125	84	26	22	30	11	298
Number of employees.. ..	1,802	2,011	704	1,079	268	211	6,075
Actual horse-power of engines employed	182,316	205,777	50,598	78,782	36,822	72,666	626,961
Approximate value of land and buildings .. .. £	2,237,949	1,730,865	219,579	546,544	175,736	10,634	4,921,307
Approximate value of plant and machinery .. £	5,280,887	7,900,455	1,961,153	1,810,688	609,845	3,254,702	20 817,730
Total amount of wages paid during year .. £	488,125	549,080	177,258	278,499	64,760	47,458	1,605,180
Value of fuel used .. £	1,233,573	684,785	129.853	210,278	142,478	7.786	2,408,753
Total value of output £	3,573,374	2,382,582	744,858	802,971	338,198	316,932	8,158,915

(a) Year ended 31st December, 1924.

31. Gas and Coke Works.—(i) *Details for each State, 1924–25.* Gas works are in operation in nearly all the chief towns in Australia. In New South Wales there are fourteen and in Queensland two coke factories which are worked as separate industries. The subjoined table gives particulars of gas and coke works in each State for the year 1924–25:—

GAS AND COKE WORKS, 1924–25.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (c)	Tas.	Australia.
Number of factories	61	45	18	8	4	2	138
Number of employees.. ..	2,475	2,464	649	700	72	134	6,494
Actual horse-power of engines employed	7,279	2,009	547	1,366	225	140	11,566
Approximate value of land and buildings .. .. £	1,042,611	466,115	233,588	(a)	76,568	(a)	b1,880,024
Approximate value of plant and machinery .. £	3,627,636	1,970,100	1,013,726	(a)	115,904	(a)	b7,566,279
Total amount of wages paid during year .. £	627,014	667,754	155,441	(a)	19,184	(a)	b1,670,436
Value of fuel used .. £	222.620	10,622	9,902	(a)	6,947	(a)	b 291,232
Value of raw material used £	1,857,315	809,709	151,045	(a)	37,484	(a)	b3,089,508
Total value of output £	3,882,896	2,087,358	509,537	(a)	87,901	(a)	b7,250,094
Value added in process of manufacture .. .. £	1,802,961	1,267,027	348,590	(a)	43,470	(a)	b3,869,354

(a) Information not available for publication. (b) Including South Australia and Tasmania. (c) Year ended 31st December, 1924.

(ii) *Coal Used and Production, 1924–25.* The following table shows the quantity and value of the production of gas and coke works in each State during the year 1924–25 :—

GAS AND COKE WORKS.—COAL USED AND PRODUCTION, 1924–25.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (*a*)	Tas.	Australia.
			COAL USED.				
Coal .. .. tons	1,653,187	406,868	106,476	(*b*)	13,534	(*b*)	*c*2,282,070
			PRODUCTS.				
Gas .. 1,000 cubic feet	9,786,898	5,608,313	1,308,498	(*b*)	217,117	(*b*)	*c*18,377,039
Coke .. .. tons	1,063,690	266,436	61,734	(*b*)	6,682	(*b*)	*c*1,462,021
			VALUE.				
Gas .. .. £	1,879,917	1,540,000	515,492	(*b*)	72,761	(*b*)	*c*4,510,742
Coke .. .. £	1,500,453	266,436	59,795	(*b*)	10,982	(*b*)	*c*1,944,832

(*a*) Year ended 31st December, 1924. (*b*) Not available for publication.
(*c*) Including South Australia and Tasmania.

In order to cope with the general industrial expansion, the production of gas increased from 16,757,216 cubic feet in 1920–21 to 18,377,039 cubic feet in 1924–25, while the output of coke rose from 1,278,939 to 1,462,021 tons during the same period.

CHAPTER XXIII.

WATER CONSERVATION AND IRRIGATION.

§ 1. Artesian Water.

1. **General.**—In every country in which droughts are recurrent, there are few problems the solution of which is of greater importance than that of an adequate system of water conservation. Much has been done in Australia so far as the supply of water to centres of population is concerned, and a description of several of the metropolitan water-works will be found herein, viz., in the chapter dealing with Local Government. Interstate Conferences on artesian water were held in 1912, 1914, 1921, and 1924, when combined Governmental action was agreed upon with reference to delimitation of the artesian basins, hydrographic surveys, analyses and utilization of artesian water, etc. (See map on page 825.)

2. **The Great Australian Artesian Basin.**—In speaking of the "Great Australian Artesian Basin," the area is understood which includes (*a*) considerably more than one-half of Queensland, taking in practically all that State lying west of the Great Dividing Range, with the exception of an area in the north-west contiguous to the Northern Territory; (*b*) a considerable strip of New South Wales along its northern boundary and west of the Great Dividing Range; and (*c*) the north-eastern part of South Australia proper, together with the extreme south-eastern corner of the Northern Territory. This basin (shown approximately by the map on page 825) is said to be the largest yet discovered, and measures about 600,000 square miles, of which 376,000 square miles are in Queensland, 118,000 square miles in South Australia, 80,000 square miles in New South Wales, and 25,000 square miles in the Northern Territory. The area of the intake beds is estimated at 60,010 square miles, viz., 50,000 square miles in Queensland and 10,010 square miles in New South Wales. A description of the basin and its geological formation will be found in previous issues of the Year Book (see No. 6, p. 569).

3. **The Western Australian Basins.**—The Western Australian Basins fall naturally within five distinct groups, viz., the Eucla Basin, in the extreme south-east of the State, extending well into South Australia along the shores of the Great Australian Bight; the Coastal Plain Basin, west of the Darling Range; the North-West Basin, between the Murchison and Ashburton Rivers; the Gulf Basin, between Cambridge Gulf and Queen's Channel; and the Desert Basin, between the De Grey and Fitzroy Rivers.

The Recent and Tertiary strata which enter Western Australia at its eastern border, and which have a prevailing dip towards the Great Australian Bight, form the Eucla artesian water area. Where boring operations have been undertaken, the water has been found to be salt or brackish, and there are other conditions affecting the supply, such as local variations in the thickness of the beds, their relative porosity, and the unevenness of the floor upon which they rest, which, so far, have not been examined with sufficient thoroughness to enable many particulars to be given in regard to this basin.

In the Coastal Plain Basin to the west of the Darling Ranges artesian boring has, on the other hand, been carried on successfully for many years.

4. **The Murray River Basin.**—The Murray River basin extends over south-western New South Wales, north-western Victoria, and south-eastern South Australia. It is bounded on the west by the azoic and palæozoic rocks of the Mount Lofty and other ranges extending northwards from near the mouth of the Murray to the Barrier Range, and on the east and north-east by the ranges of Victoria and New South Wales. This tertiary water-basin is occupied by a succession of sedimentary formations, both porous and impervious. It is of interest to note that the waters of the Murray River are partly

supplied by influx from the water-bearing beds of this basin ; this is proved by the fact that, at low water, springs are observed at certain places flowing into it from beneath the limestone cliffs from Pyap Bend downwards. Similar springs exist along the courses of other branches of the River Murray system, where they cut through the tertiary formation. On the Victorian side bores have been put down, and water has been struck at various levels.

5. **Plutonic or Meteoric Waters.**—In previous Year Books will be found a statement of the theory of Professor Gregory[*] as to the origin of the water in the Australian artesian basins together with the objections held thereto by a former Government Geologist of New South Wales.[†] (See Official Year Book No. 6, p. 570.)

6. **Artesian and Sub-Artesian Bores.**—(i) *General.* The following table gives particulars of artesian and sub-artesian bores in each State and in the Northern Territory :—

ARTESIAN AND SUB-ARTESIAN BORES, 1924-25.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust. (c)	W. Aust.	N. Ter.	Total.
Bores existing .. No.	510	360	3,018	143	218	169	4,418
Total depth of existing bores feet	854,282	96,900	[d]3,755,597	112,562	193,788	55,635	5,068,764
Daily flow 1,000 gals.	[a]78,697	[b]	[a]301,334	[a]12,972	65,231	6,799	[e]465,033
Depth at which artesian water was struck—							
Maximum .. feet	4,338	700	6,000	4,850	3,325	1,760	6,000
Minimum .. feet	89	150	10	55	39	42	10
Temperature of flow—							
Maximum .. °Fahr.	140	[b]	212	208	140	[b]	212
Minimum .. °Fahr.	72	[b]	78	82	75	[b]	72

(*a*) Flowing bores only. (*b*) Not available. (*c*) Government bores only. (*d*) Total depth of all bores. (*e*) Incomplete.

(ii) *New South Wales.*—(*a*) *Artesian Water Supply.* The New South Wales portion of the great Australian basin, comprising approximately 80,000 square miles, is situated in the north-western portion of the State. Artesian boring in New South Wales dates from 1879, when a private bore was put down on the Kallara pastoral holding, between Bourke and Wilcannia. The first Government bore was that at Goonery, on the Bourke-Wanaaring road, completed in 1884.

The following statement shows the extent of the work successfully carried out by the Government and by private owners up to 30th June, 1925 :—

EXISTING ARTESIAN BORES.—NEW SOUTH WALES, 1925.

Bores.	Flowing.	Pumping.	Total.	Total Depth.
				feet
For Public Watering-places, Artesian Wells, etc.	132	37	169	349,247
For Country Towns Water Supply ..	3	1	4	6,533
For Improvement Leases	21	6	27	39,593
Total Government Bores ..	156	44	200	395,373
Private Bores	221	89	310	458,909

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[*] See *J. W. Gregory, F.R.S., D.Sc.:* "The Dead Heart of Australia," London, John Murray, 1906; "The Flowing Wells of Central Australia," Geogr. Journ., July and August, 1911.

[†] *E. F. Pittman, A.R.S.M., formerly Government Geologist of New South Wales:* "Problems of the Artesian Water Supply of Australia, with special reference to Professor Gregory's Theory." (Clarke Memorial Lecture, delivered before the Royal Society of New South Wales, 31st October, 1907); "The Great Australian Artesian Basin," Sydney, 1914; "The Composition and Porosity of the Intake Beds of the Great Australian Artesian Basin," Sydney, 1915.

The average depth is 1,976 feet in the case of Government bores, and of private bores 1,480 feet, and it ranges from 89 to 4,338 feet. The two deepest wells in New South Wales are those at Boronga, in the County of Stapylton, with a depth of 4,338 feet and a present outflow of 858,134 gallons; and at Dolgelly, in the Parish of Carennga, in County Stapylton, with a depth of 4,086 feet, and a present discharge of 450,854 gallons per day. The largest flow at the present time is that at the Wirrah bore, in the County of Benarba, which yields 975,863 gallons a day, and has a depth of 3,578 feet.

Of the 558 bores which have been sunk, 377 are flowing, and give an aggregate discharge of 78,637,423 gallons per day; 133 bores give a pumping supply, the balance of 48 being failures; the total depth bored represents 915,224 feet.

The flow from 80 bores is utilized for supplying water for stock on holdings served in connexion with Bore Water Trusts or Artesian Districts under the Water Act of 1912. The total flow from these bores amounts to 31,894,522 gallons per day, watering an area of 4,585,305 acres by means of 2,851 miles of distributing channels. The average rating by the Bore Trusts to repay the capital cost with 4 per cent. interest in twenty-eight years, is 1.5d. per acre, including the cost of maintenance and administration.

In the majority of cases the remaining bores are used by pastoralists for stock-watering purposes only, but in a few instances the supply is utilized in connexion with country towns.

The watering of the north-western country by means of bore water has largely increased the carrying capacity of the land; and, what is of perhaps greater importance, it has made comparatively small pastoral holdings practicable in country previously confined almost entirely to the operations of companies holding immense areas.

It having been determined that multiplicity of bores is the chief factor governing the annual decrease in bore flows, and that limiting the discharge from a bore will prolong its flowing life, action has been taken to prevent any waste by controlling the bore flow to actual requirements. It is confidently anticipated that this action will materially reduce the rate of decrease in the future.

(*b*) *Private Artesian Bores.* Much has been done in the way of artesian boring by private enterprise. As far as can be ascertained, 334 private bores have been undertaken in New South Wales, of which 24 were failures. The yield of the flowing bores is estimated at 36 million gallons per day. No data are available regarding the pumping bores.

(*c*) *Shallow Boring.* The scheme described in Official Year Book No. 9 (p. 520) for assisting settlers by sinking shallow bores has met with considerable success.

Operations commenced with one plant only, but the number has been increased gradually until 32 plants are at work.

A large number of applications from settlers wishing to take advantage of the liberal conditions offered under the regulations has been received, and further applications are coming to hand daily, consequently the plants now in use will probably be insufficient to cope with the demand. Out of 1,600 bores put in hand up to 30th June, 1925, 291 have proved failures.

There can be no question that the added value of the holdings represented by the bores already put down is considerably in excess of their cost, and as fairly conclusive evidence of this, it might be stated that in several instances the Government Savings Bank has, on completion of a bore, made the settler a sufficient advance to enable him to pay the total cost in cash.

In addition to the work carried out under the Shallow Boring Regulations outlined above, shallow boring plants have sunk 22 bores in the Pilliga scrub and on Crown lands for the Lands and Forestry Departments.

The fact that of the bores put down in the Pilliga scrub, 53 are giving a flowing supply, adds much to their value, and is of special interest as indicating the possibility of tapping a small and hitherto unknown artesian basin.

(iii) *Victoria.* Victoria lies altogether outside the Great Australian Artesian Basin, and as water in generally available from surface or shallow underground supplies, there has not been much occasion for artesian boring. As early as 1880, however, an artesian well was bored at Sale, which gave a large supply of water of fair quality before it failed through corrosion of the casing. In 1905 a new bore was put down, which at a depth of 277 feet yielded sufficient water to fill Lake Guthridge, a local depression. As the water was, however, impure, and contained an excess of sulphuretted hydrogen, boring operations were continued to 520 feet, when the lowering of the casing shut off the supply of water. A further bore was then put down at some distance from the first, and this, at a depth of 238 feet, yielded a fresh and clear water supply of about 145,000 gallons per day. Corrosion troubles occurred here also, and at the end of 1912 another bore was put down to a depth of 235 feet, artesian flows being struck at 187 feet and 235 feet. Towards the end of 1915 a flow of 200,000 gallons per day was struck at a depth of 125 feet on the Powerscourt Estate, near Maffra. Other bores are being put down in the locality.

Largely due to the failure of surface supplies in the drought of 1878 to 1886, no less than 499 bores were, before the end of 1888, put down by shire councils aided by the Government. The total depth bored was 40,000 feet; fresh water was struck in 78 instances; 47 yielded brackish but usable water; 229 were salt, while the balance were dry. The bores covered practically the whole of the settled portions of Northern and North-western Victoria and parts of Gippsland.

In the late eighties a number of bores was put down in the north-western part of the State, varying from 200 to over 2,000 feet in depth, but without any notable success. In 1897 a Board reported on boring for artesian water supply in the Mallee country, but this report was adverse, except as regards the extreme northern portion thereof. In 1906 eight bores were put down on the Overnewton Estate, Maribyrnong, to depths varying from 147 to 272 feet; small supplies of good and medium water for stock purposes were obtained, but only one of the wells yielded water fit for domestic purposes. In 1908 boring was commenced in the Mallee country near the border east of Pinnaroo in South Australia, and a line of bores from the Border to Kow Plains has proved the existence of a large sheet of underground water. Altogether, 97 bores have been successful in striking fresh water, and their depths vary from 155 to 752 feet, the water rising to within from 207 to 6 feet of the surface. In three instances the bores flow, the water rising from 4 to 17 feet above the surface. The fresh water extends nearly as far east as the 142nd meridian, and its northern limit is approximately the 35th parallel.

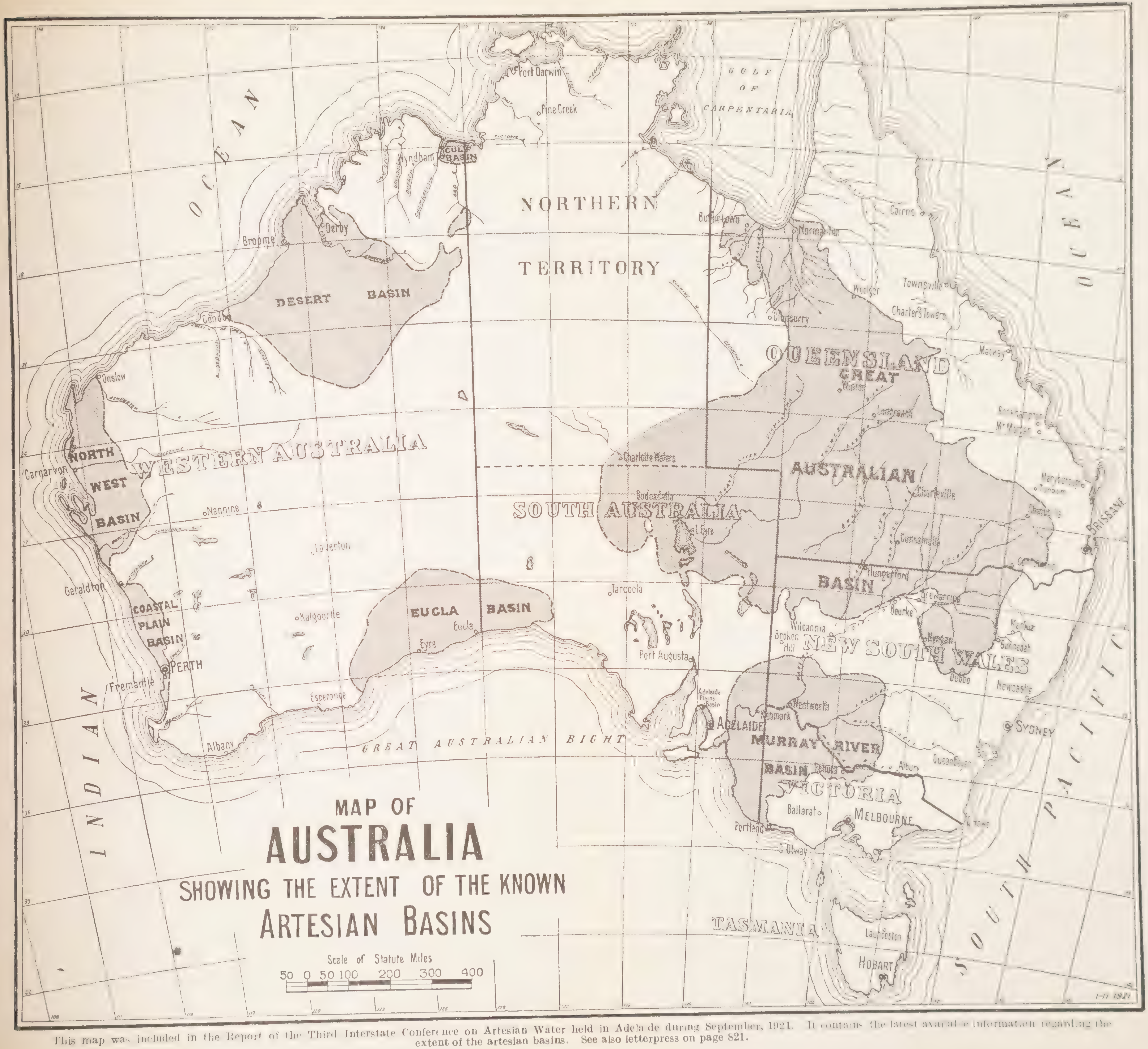
At the 30th June, 1925, the number of existing bores in use in the north-western portion of Victoria (Mallee) was 360, from which supplies are obtained by pumping. The total depth bored amounted to 96,900 feet, while the maximum and minimum depths at which water was struck were 700 and 150 feet respectively. The figures include also about 260 existing private bores, with a total depth of about 51,200 feet.

(iv) *Queensland.* A return relating to the 30th June, 1925, classifies the Queensland artesian bores under the following headings :—

ARTESIAN BORES.—QUEENSLAND, 30th JUNE, 1925.

Sunk by—	Artesian Flows.	Sub-Artesian or Pumped Supplies.	In Progress, Abandoned, or Uncertain.	Total.
Government	78	89	142	309
Local governing authorities	18	22	25	65
Private owners	1,247	1,564	982	3,793
Total	1,343	1,675	1,149	4,167

The estimated yield of water from 1,343 flowing bores on 30th June, 1925, was 301,333,800 gallons per diem. The deepest well was about 40 miles west of Blackall, lying east of the Barcoo River; this had a depth of 7,009 feet, and was stated to yield 70,000 gallons daily. The flow is, of course, a comparatively small one, many



MAP OF
AUSTRALIA
SHOWING THE EXTENT OF THE KNOWN
ARTESIAN BASINS

INDIAN OCEAN
SOUTH PACIFIC OCEAN
GULF OF CARPENTARIA
GREAT AUSTRALIAN BIGHT
NORTHERN TERRITORY
WESTERN AUSTRALIA
SOUTH AUSTRALIA
QUEENSLAND
NEW SOUTH WALES
VICTORIA
TASMANIA
DESERT BASIN
GULF BASIN
NORTH WEST BASIN
COASTAL PLAIN BASIN
EUCLA BASIN
GREAT AUSTRALIAN BASIN
MURRAY RIVER BASIN
Adelaide Plains Basin
Port Darwin
Pine Creek
Wyndham
Derby
Broome
Condon
Onslow
Carnarvon
Nannine
Laverton
Geraldton
Kalgoorlie
PERTH
Fremantle
Esperance
Albany
Eyre
Eucla
Charlotte Waters
Oodnadatta
L. Eyre
Tarcoola
Port Augusta
ADELAIDE
Burketown
Normanton
Cloncurry
Cairns
Townsville
Charters Towers
Mackay
Winton
Longreach
Rockhampton
Mt. Morgan
Maryborough
Charleville
Cunnamulla
BRISBANE
Hungerford
Brewarrina
Bourke
Wilcannia
Broken Hill
Nyngan
Dubbo
Gunnedah
Newcastle
SYDNEY
Wentworth
Renmark
Albury
Ballarat
MELBOURNE
Portland
C. Otway
Launceston
HOBART
Scale of Statute Miles
50 0 50 100 200 300 400
1-11-1921

This map was included in the Report of the Third Interstate Conference on Artesian Water held in Adelaide during September, 1921. It contains the latest available information regarding the extent of the artesian basins. See also letterpress on page 821.

wells yielding, when uncontrolled, from one to three million gallons a day. The waters of many of the wells have been analysed, and some found suitable for wool-scouring only, others are suitable for watering stock but not for irrigation, owing to the presence of alkali; others again serve for both stock and irrigation, while some, such as those containing sulphuretted hydrogen, are not of any use. Water fit for stock may generally be said to be "safe" for domestic purposes in spite of its slightly mineral taste. The wells yielding the mineral waters known as "Helidon Spa," "Boonah Spa," and "Junot Spa," which are much in use in Queensland and New South Wales, are shallow wells from 60 to 200 feet in depth.

Of the 4,167 bores in Queensland, 374 have been put down by the State Government or Local Authorities, while 3,793 have been sunk by private enterprise; 1,343 bores are flowing, and 1,675 give a pumping supply; the balance of 1,149 are either in progress of construction, abandoned, or uncertain. The total depth bored is 3,755,597 feet. The minimum and maximum depths at which artesian water was struck are 10 feet and 6,000 feet respectively, while the temperature of the flow ranged from 78 to 212 degrees Fahr.

Fifty Bore Water Supply Areas were completed on 30th June, 1925, comprising a total of 4,463,549 acres within the gazetted areas, over which water was distributed in 1,790 miles of drains. Four additional Bore Water Supply Areas were in hand on 30th June, 1925, comprising an area of 408,816 acres, and 235 miles of drains.

(v) *South Australia.*—(*a*) *General.* There were in South Australia 143 Government bores existing at 30th June, 1925, of which 36 were artesian and 107 sub-artesian. Of these, 105 were under 1,000 feet in depth; 23 from 1,000 to 2,000 feet; 7 from 2,000 to 3,000 feet; 5 from 3,000 to 4,000 feet; and 3 over 4,000 feet. The deepest flowing bore was at Patchawarra, on the Farina to Haddon *via* Innamincka route, measuring 5,458 feet, but now yielding only 50 gallons per day. The maximum flow, viz., 1,250,000 gallons, is obtained at Coonie Creek, east of Lake Frome.

The following table gives particulars as to South Australian bores at 30th June, 1925:—

ARTESIAN BORES. (*b*)—SOUTH AUSTRALIA, 1925.

Particulars.		Artesian and Sub-artesian.
Bores sunk during 1924–25	No.	..
Bores existing	No.	143
Total depth of existing bores	feet	112,562
Daily flow	,000 gallons	(*a*) 12,972
Depth at which water was struck—		
Maximum	feet	4,850
Minimum	feet	55
Temperature of flow—		
Maximum	°Fahr.	208
Minimum	°Fahr.	82
Total cost of construction of existing bores up to 30th June, 1925	£	321,795
Expenditure during year on boring operations	£	..

(*a*) Flowing bores only. (*b*) Government bores only.

Of the above-mentioned bores, 46 are situated within the Great Artesian Basin, and the remainder are in the Lower Murray and other local basins.

(*b*) *Bores between the Murray and the Eastern Boundary of the State.* The sinking of bores across the Ninety-mile Desert between the Murray and the Victorian boundary was commenced in 1886 at Coonalpyn; with the exception, however, of salt water at 55 feet, no success was met with. Ki Ki bore was sunk in 1887, and at 361 feet a good supply of water fit for stock was struck. Tintinarra bore was sunk in 1887; it was artesian when first tapped. The water was found to be fit for locomotive engines and is still used for that purpose. The bore at Emu Flat was also sunk in 1887. In 1904, a bore was sunk at Cotton, and numerous successful bores have since been put down by the Public Works Department, and subsequently by residents of the district. The water rises to a distance from the surface of from 15 to 320 feet, and the maximum quantity obtained per diem is 48,000 gallons at the Gosden bore. Several wells, ranging in depth from 55 to 221 feet, have also been sunk in this district. The latest Government bores are Pata bore in the Hundred of Pyap, and Beulah bore in the Hundred of Wilson, at both of which large supplies of water containing ¾ oz. of solids per gallon were obtained.

(c) *Bores West of Oodnadatta.* A series of bores has been sunk, beginning with Breaden bore, 20 miles west of Oodnadatta, which was put down in 1911. The others since put down in this district are at Gypsum, Imbitcha, Mirackina, Raspberry Creek, Appreetinna, Wintinna, and Marla. Of these, the only artesian supply is at Raspberry Creek, where 1,000,000 gallons per day of good water are obtained. The depths of these bores range from 280 feet at Mirackina to 1,122 feet at Breaden, and the water from all of them is good. Warranarrea bore, situated 72 miles west of Oodnadatta on Pastoral Lease No. 1297 has been completed to a depth of 466 feet, a large supply of good water being obtained.

(d) *Eyre Peninsula.* From time to time bores have been sunk on Eyre Peninsula, but with little success. In some instances, stock water (1½ oz. salt to the gallon) was obtained, but this occurred only on the Nullarbor plains. In all other cases the water struck was too salt to be used. Consequently the supply of water is now principally from catchments, and a number of reservoirs have been constructed to hold from 1,000,000 to 18,500,000 gallons each, while many underground tanks have been built to contain from 40,000 up to 500,000 gallons each.

(e) *Bores sunk during the Year.* A bore at Charlotte Waters for the Commonwealth Government was completed during the year, good water being struck at 614 ft. 6 in., and the bore was continued to 646 ft. 6 in. A series of bores is being put down by the Land and Survey Department with the object of ascertaining whether useful supplies of underground water are available in the north-western portion of the State, this area being at present unsuitable for pastoral occupation.

(vi) *Western Australia.*—(a) *General.* The work by which the Government of Western Australia provides a permanent supply of water to Kalgoorlie, Boulder, and adjacent districts on the eastern goldfields comes properly under the heading of "Water Supply Works." A description of this undertaking is fully given in previous issues of the Official Year Book. (See Official Year Book No. 6, p. 576.)

Statistics in connexion with the Goldfields Water Supply undertaking and the Mines Water Supplies will be found in the chapter of this book dealing with *Local Government.*

The following table gives particulars regarding Western Australian artesian bores at 30th June, 1925 :—

EXISTING ARTESIAN BORES.—WESTERN AUSTRALIA, 30th JUNE, 1925.

Particulars.		State.	Private.	Total.
Bores sunk during year	No.	..	9	9
Bores existing	No.	109	109	218
Total depth of existing bores	feet	91,905	101,883	193,788
Daily flow	gallons	27,118,520	38,112,680	65,231,200
Depth at which artesian water was struck—				
Maximum	feet	2,527	3,325	3,325
Minimum	feet	39	70	39
Temperature of flow—				
Maximum	°Fahr.	140	128	140
Minimum	°Fahr.	76	75	75

To 30th June, 1925, the total number of Government bores was 109, while there were, in addition, approximately 109 private bores recorded.

(*b*) *The Coastal Plain Basin or Perth Area*, which, generally speaking, extends from Cape Leeuwin to Dongarra, and from which the Metropolitan Water Supply is largely drawn, yields a supply of water mostly fresh and suitable for domestic purposes, though towards the north it becomes brackish and is only suitable for stock.

There are 48 bores in the Metropolitan area, several of which have been put down to augment the hills supply and the domestic supply of the suburbs, and Fremantle is largely dependent upon this source.

(*c*) *The North-west Basin or Carnarvon Area* may be said to extend from Gantheaume Bay in the south to Onslow in the north, and embraces a very large tract of ideal sheep country.

Many private bores have been put down on sites which permit of the gravitation of the water for miles, and, by this means, a very considerable area has been made available for stock-raising. In all, about 75 bores have been put down.

(*d*) *The Gulf Basin or Broome Area.* So far very little development work has been done. Artesian bores have been put down in the town site, and the domestic requirements of the town are entirely supplied from this source. The area extends from Condon in the south-west to the Meda River beyond Derby in the north, and for a considerable distance inland. So far only 8 bores have been sunk, 3 being at Broome, 2 at Derby, and 3 on the telegraph line on the road between Derby and Hall's Creek, about 12, 67, and 80 miles inland.

(*e*) *Eucla Area.* This area extends from Eucla, on the South Australian border, to west of Israelite Bay. So far, beyond the bores put down on the route of the Trans-Australian Railway, very little has been done in proving the resources of this area. In 1902 the first bore was sunk, about 35 miles north of Madura, and sub-artesian water was struck at 430 feet, at an elevation of 400 feet above sea level. Following upon this, a deep bore was put down at Madura, below the cliff and nearer the coast, when an artesian supply of stock water was obtained at a depth of 2,041 feet, yielding 5,700 gallons per day. Later, about 20 bores were sunk along the survey line of the railway, which runs east and west about 90 miles inland. These bores were put in at intervals between the 205 mile peg and the South Australian border, and ranged in depth between 323 and 1,344 feet. In most instances only stock water was struck at depths varying between 300 and 1,300 feet, and the largest supply was estimated at about 10,000 gallons per day.

(vii) *Northern Territory.* In the Northern Territory, bores to the number of 180 were put down up to 31st March, 1926, which number does not include bores put down by hand-boring plants for test purposes. One bore is artesian, and the others give a pumping supply, the daily flow at the end of the year being 7,462,120 gallons. The total depth bored in State and private bores was 58,829 feet, and the maximum and minimum depths were 1,760 and 42 feet respectively.

§ 2. Irrigation.

1. **General.**—Australia's first experiments in irrigation were made with the object of bringing under cultivation areas in which an inadequate rainfall rendered agricultural and even pastoral occupations precarious and intermittent, and, although these original settlements have generally proved fairly successful, most of the States, instead of promoting new settlement in unoccupied regions, are adopting the policy of making existing settlements closer, by repurchasing large estates, subdividing them into holdings of suitable sizes for cultivation, and selling the land upon easy terms of payment. It is in connexion with this Closer Settlement policy that the special value of irrigation is recognized.

2. New South Wales.—(i) *General.* The recognition of the fact that the area suitable for cultivation might be extended largely by a system of water conservation and irrigation has induced the Government to undertake various detached works and schemes, which will constitute portion of the system necessary to serve the whole State.

The system, and the works necessary to its maintenance and development within the State of New South Wales, are under the control of the Water Conservation and Irrigation Commission, which consists of the Minister for Agriculture for the time being as Chairman, and two other Commissioners. The works controlled by the Commission nclude the great Murrumbidgee Irrigation Scheme; the small irrigation settlements at Hay, Curlwaa (Wentworth) and Coomealla; national works of water conservation; shallow boring for settlers; and water trusts and artesian bore trusts operating under the Water Act. The Commission has control also of storage and diversions of water by private persons for purposes of conservation and irrigation.

(ii) *Murrumbidgee Irrigation Scheme.* The main features of the scheme include a storage dam across the Murrumbidgee at Burrinjuck to retain the floodwaters, which will be released for use lower down the river during the dry summer months; a movable diversion weir at Berembed, about 240 miles below the dam, to turn the required amount of water from the river into the main canal; a main canal, leaving the river near the weir; four main branch canals and a series of subsidiary canals and distributing channels through the area to be irrigated; bridges, checks, regulators and other structures throughout the entire system, and meters for measuring the volume allowed to each farm. Towns and villages, roadways to serve each farm, and a general surface drainage system, are also included in this scheme.

Further details in respect of the storage dam, diversion weir and canals, together with the areas thrown open for settlement and the conditions of tenure, are contained in previous issues of the Official Year Book. (See Official Year Book No. 15, page 442.)

The irrigation area is situated on the northern side of the Murrumbidgee River, where it is anticipated that there will ultimately be upwards of 200,000 acres under irrigation in blocks devoted to fruit, vegetable and rice growing, dairying, stock-raising, etc. With the aid of irrigation, the soil and climate of these areas are suitable for the production of apricots, peaches, nectarines, prunes, pears, plums, almonds, melons, cantaloups, and citrus fruits, also wine and table grapes, raisins, sultanas, figs, olives, peanuts, and most varieties of vegetable and fodder crops. Dairying and pig-raising are being undertaken by large numbers of settlers in the areas, and the canning and drying of fruit and the production of wine are industries of large dimensions. The district is one of the greatest fresh fruit producing centres in the State. The growing of rice on this area promises to develop into an important industry. An area of about 2,200 acres was sown to rice in 1925–26, and it is expected that the acreage in the future will be very much larger.

An up-to-date butter factory, which is managed co-operatively by dairymen on the areas, is in operation at Leeton. The output for the year under review was approximately 543 tons, from 269 suppliers. The factory supplies ice to town residents and settlers. A fruit-canning factory has also been provided, which purchases fruits grown by the settlers, and operates on a large scale. Co-operative companies have been successfully floated for the handling of fruit not suitable for canning. Successful pooling schemes have been evolved for the economic handling of fresh fruit. A bacon factory and abattoirs under the same management as the butter factory have been erected at Yanco, where the settlers' pigs are treated, and where stock for butchers is slaughtered for local consumption.

The Department of Agriculture, which controls the Yanco Experimental Farm, has also established at Griffith (Mirrool irrigation area), a viticultural nursery for the propagation of vines.

An electric power station having been erected near Yanco Railway Station, electric light and power are supplied to the various factories, business people, and residents of Leeton, Griffith, Yenda, and Yanco, and the supply is also available for settlers when the number of applicants in any centre warrants the connexions being made.

On the 30th June, 1925, 1,991 farms were held, representing a total area of 112,500 acres. The number of town blocks held was 926.

In the matter of cultivation, the following particulars indicate the extent of the work performed by the settlers :—There are approximately 8,724 acres under deciduous fruits, 5,519 under citrus fruits, 7,640 under vines, and 2,200 acres under rice. The estimated population of the area is about 15,000.

(iii) *Curlwaa Irrigation Area.* The Curlwaa irrigation area is situated on the Murray River near its junction with the Darling River, and comprises 10,550 acres, of which on 30th June, 1925, irrigable holdings consisting of 1,883 acres had been taken up in areas of 1½ to 40 acres, with a leasehold tenure of 30 years, at rentals of from 1s. to 10s. per acre per annum for the most part, and up to 35s. per acre in some blocks set apart during recent years. Of the balance, 7,545 acres were leased as non-irrigable holdings for short terms, in the majority of cases up to five years, with rentals of from 7d. to 5s. per acre, while the remainder of the area, with the exception of a few vacant holdings, is made up of roads, channels, and other reserves. Of the irrigable area, 1,230 acres are planted as orchards and vineyards, of which 980 acres are in full bearing. There is also a small area under lucerne. It has been proved that the Curlwaa soil is eminently suited to the growth of citrus and other kinds of fruit, and some of the finest oranges grown in New South Wales are produced on this area.

The estimated weight of dried fruits produced on the Curlwaa area in the year 1924–25 was 11,000 cwt., the principal yields being sultanas, 4,760 cwt. ; peaches, 507 cwt. ; lexias, 1,417 cwt. ; apricots, 744 cwt. ; and currants, 2,630 cwt. The value of the dried fruit production was estimated at £49,414, while fresh fruit, crops, and other produce of the value of £23,559 were also produced.

Water is pumped from the Murray River by a suction gas plant in 3 units, with a total capacity of 12,500 gallons per minute and a lift of about 36 feet, and is supplied to the lessees at a flat rate of 20s. per acre per annum. There is also a general rate of 14s. per acre per annum upon the portion of the irrigated area in productive bearing. During the season 1924–25 the quantity of water supplied was 205,795,000 cubic feet, or 4,724 acre-feet, the average area watered during six irrigations being 1,343 acres. Each lessee is entitled to receive a quantity of water equivalent to a depth of 30 inches per annum.

(iv) *Hay Irrigation Area.* The Hay irrigation area consists of about 4,500 acres, of which on 30th June, 1925, the area held and used for irrigation purposes was 1,035 acres, in 108 blocks of from 3 to 34 acres. The term of lease is generally 30 years, and the annual rental from 5s. to 12s. per acre. In addition, there was at that date an area of 2,876 acres of non-irrigated land taken up in 50 blocks for short terms up to five years, with rentals of from 1s. to 10s. per acre. Water is lifted from the Murrumbidgee River by suction gas-driven pumping machinery in 2 units, with a total capacity of 4,000 gallons per minute, and a maximum lift of 30 feet. The rate charged to settlers is £1 10s. per acre per annum, but no general rate is levied as at Curlwaa. During the 1924–25 season 140,023,432 cubic feet of water were pumped with seven pumpings. The principal industry is dairying, milk being supplied to the town of Hay, and cream to the local butter factory.

(v) *Projected Irrigation Schemes.* (*a*) *General.* The Water Conservation and Irrigation Commission is investigating schemes for utilizing the New South Wales share of the Murray waters, and for storing water for the purpose of irrigation and stock and domestic supply on the Lachlan, Macquarie, Hunter, Namoi and Peel Rivers.

(*b*) *Murray River.* The effect of constructing the Upper Murray storage will be to ensure at all times sufficient flow below Albury to permit of diversions for irrigation and stock and domestic supplies, and also to make good the losses in the river due to seepage, evaporation, and lockages. The Act provides that, subject to certain conditions, New South Wales and Victoria shall share the regulated flow of the river at Albury, and shall each have the full use of all tributaries of the River Murray within its territory below Albury, with the right to divert, store, and use the flows thereof.

It is estimated that the New South Wales regulated river flow after the construction of the Upper Murray storage will amount to at least 120,000 acre-feet per month at Albury during the irrigating season, and this will permit of a considerable amount of irrigation development along the river.

An investigation is being made into the manner in which the New South Wales proportion of the Murray waters can be most profitably applied, but as yet no conclusion has been reached.

(*c*) *Lachlan River.* The construction of a storage reservoir at Wyangala, below the confluence of the Abercrombie River, is being investigated with the intention of providing water in the river channel for pastoral purposes and for the irrigation of limited areas along the river banks. A proposal is also being investigated for the increase of the storage in Lake Cudgellico, which is fed from the Lachlan River, portion of the stored water being released in the summer months to supplement the flow of the river when necessary. The possibility of constructing a series of low weirs between the towns of Cowra and Booligal is also receiving consideration.

(*d*) *Macquarie River.* The construction of a storage reservoir on the river at Burrendong, below the confluence of the Cudgegong River, for the purpose of affording water for irrigation and stock and domestic supply below Wellington is now being investigated. Smaller schemes for the construction of storage dams at White Rock and on Campbell's River, at Bathurst, have also received consideration. Systematic gaugings are being made of the river flow with a view to determining the quantity of water which will be available if the storage dam be constructed.

(*e*) *Hunter, Namoi, and Peel Rivers.* Pumping by licensed private irrigators under the Water Act is increasing at such a rapid rate that in the case of some of the rivers. such as the Peel and the Hunter, it will not be possible to adequately supply the pumps in dry seasons until head storage works have been constructed. Investigations are in progress for storage dams on the Hunter and Peel Rivers, for dams on the Namoi River above Manilla, and lower down above the junction of the Peel River at alternate sites.

(*f*) *Coomealla Area.* In their report of 20th September, 1922, the Murray Lands Advisory Committee recommended that an irrigation district of some 20,000 acres, including a small adjacent portion of Gol Gol, be established at Nine Mile, and subdivided into farms of from 15 to 20 acres, the development of such area to be by gradual stages. This area, which is situated on the Murray River, about 9 miles by road from Wentworth, upstream, has since been named Coomealla. At the end of July, 1923, instructions were given to proceed with the preparation of the first section, and the necessary works in connexion therewith were nearing completion at the 30th June, 1925. The area of this section comprises 3,090 acres, of which 2,314 acres have been subdivided into 129 horticultural farms and 43 residential holdings. The average area per horticultural farm is 17.2 acres, of which 15.4 acres are irrigable.

Water is being supplied from the Murray River by a steam-driven pumping plant of two units, with a total capacity of 38 cubic feet per second, through an electrically-welded steel rising main, 5 feet 6 inches in diameter and 2,150 feet long. This main will be of sufficient capacity to deal with the whole area, about 8,000 acres, which can be commanded by the lower lift. The pumping station, which is protected against flood by a levee bank, includes two Rees water-tube boilers with an evaporation of 5,000 lb. of water per hour, and two pumping sets, comprising each a two-stage centrifugal pump driven by an engine of the two crank, compound vertical enclosed and forced lubrication, quick revolution type. Until the completion of the lock and weir now in progress at Mildura the lift may reach 81 feet, but when pumping later from the lock pool this will be reduced to 74 feet. The balance of the 20,000 acres referred to above will require a higher lift.

At the end of June, 1925, about 36⅓ miles of channels had been excavated and 15⅔ miles lined. The lining of the main channels, with bed widths exceeding 3 feet, consists of concrete, 2 inches thick, while for the smaller channels a mortar lining, 1½ inches thick, with reinforcement of ¼-inch round steel rods, has been used. The scheme includes the construction of bridges, checks and other structures, the bulk of which have been completed, as also the receiving basin, drainage channels, etc., and the total expenditure to 30th June, 1925, was £109,880 16s. 10d.

Following the usual practice on the Murray River, water will be charged for at a flat rate and meters will not be installed. The first twenty-five farms were set apart for application in May, 1924, under perpetual leasehold tenure, but none of the applications received was proceeded with. After the passing of the Irrigation Holdings (Freehold) Act 1924, fresh applications were invited for these farms in May, 1925, giving an option of perpetual leasehold or of farm purchase, with a payment period of 36½ years. Due, no doubt, in large part to the uncertain state of the dried fruit market, and also the large irrigation developments in other States, the number of applications received has been most disappointing, and at 30th June, 1925, only one farm had been granted at Coomealla.

(vi) *Water Rights.* By Part II. of the Water Act 1912, the right to the use and flow and to the control of the water in all rivers and lakes which flow through, or past, or are situate within the land of two or more occupiers is vested in the Crown. Private rights are almost wholly abolished, riparian law is simplified, and a system of licences is established for the protection of private works of water conservation, irrigation, water supply, drainage, and the prevention of inundation of land. The enactment prevents litigation and determines the rights of riparian owners.

During the year ending 30th June, 1925, 132 applications were received for fresh licences, comprising 75 in respect of pumps, or pumps in conjunction with dams or other works, 36 in regard to dams, and 21 other works. The number of applications received for the renewal of existing licences was 168; 101 of the applications were in respect of pumps, in some cases used in conjunction with dams or other works, 56 respecting dams, and 11 races and other works. Approximately 1,846 licences were in force on the 30th June, 1924, and in the succeeding twelve months 117 new licences were issued and 38 were allowed to lapse, so that there were about 1,925 licences current on the 30th June, 1925.

(vii) *Water Trusts and Bore Trusts.* Part III. of the Water Act 1912 provides for the supply of water either for irrigation, stock, or domestic purposes, or for drainage. The liabilities thereon are repaid to the Crown, with interest spread over a period of usually from 10 to 28 years inclusive, and the works are administered by trustees appointed from among the beneficiaries under the Act, except in the case of trusts in the Western Division, where the Western Land Board is appointed as trustee. For the supply of water, trusts have been constituted in connexion with (*a*) eighty-five artesian wells; (*b*) eight schemes for the improvement of natural off-takes of effluent channels, for the purpose of diverting supplies from the main rivers; (*c*) in five instances for the construction of weirs across stream channels; (*d*) four pumping schemes; and (*e*) one for impounding by means of regulators water which flows into natural lakes. The total area included within these trusts amounts to 9,763,793 acres.

3. **Victoria.**—(i) *General.* The Water Conservation Works in Victoria consist of irrigation works proper, and those providing mainly a domestic supply, such as the works for the supply of Melbourne, controlled by the Melbourne and Metropolitan Board of Works; the Coliban, Wonthaggi, Broken River, Kerang Lakes, Naval Base and Mornington Peninsula, and Mallee Supply Works administered by the State Rivers and Water Supply Commission; and other works of domestic supply controlled by Water Works Trusts or Municipal Corporations. Particulars of the works not controlled by the Commission will be found in the chapter on Local Government in this volume. With the exception of that of the First Mildura Irrigation Trust, all the irrigation schemes, and the more important domestic and stock water-supply works in rural districts, are vested in and controlled by the State Rivers and Water Supply Commission, a body composed of three members, which was created by the Water Act 1905, now incorporated in the Water Act 1915.

The storages for irrigation and domestic and stock supply purposes, have, at present, a total capacity of 871,610 acre-feet. The completion of works now under construction will bring the total to over 1,275,000 acre-feet, as against a total of 172,000 acre-feet in 1902. The capacity of the Hume Reservoir, which is being constructed on the Upper Murray, is not included in these figures. This reservoir will contain between 1,100,000 and 2,000,000 acre-feet, half of which, under the provisions of the River Murray Agreement, can be credited to the State of Victoria.

(ii) *Irrigation Schemes.* (*a*) *General.* This division comprises the schemes constructed and under construction for the supply of water to some twenty-five irrigation districts. Up to 1906, irrigation schemes were controlled by local Trusts, which had obtained the moneys for their construction on loan from the State. By the Water Act 1905, all local control was abolished except in the case of Mildura, and the districts were transferred to the State Rivers and Water Supply Commission. Since that date the Government has adopted a vigorous irrigation policy, and the capital expenditure at 30th June, 1925, on water supply for the irrigation and water supply districts under the control of the Commission and at Mildura, exclusive of the amount of £1,028,000 expended by it on River Murray Agreement Works, was £7,919,000. The irrigation works draw their supplies mainly from headworks constructed on the Goulburn, Murray, and Loddon Rivers. The cost of these headworks, which now stands at £1,127,000, is not debited to any particular districts, but is borne by the State. The extent of land under irrigated culture during the year 1924–25 for all kinds of crop was 375,503 acres, being an increase of 50,945 acres over the area irrigated in the previous year, and 64,072 acres on the average of the last four years.

(*b*) *Goulburn Irrigation System.* The Goulburn Irrigation System (see Official Year Book No. 13, map on page 561) is the largest project of the kind in Victoria. The need for irrigation in the Goulburn Valley is indicated by its low annual rainfall, 18 inches. while the great variation in the rainfall over the catchment area, 20 inches to 52 inches ; in the rate of flow, 180 cusecs* to 80,000 cusecs ; and in the volume of the annual river discharge, 620,000 acre-feet to 6,200,000 acre-feet, reveal clearly the necessity for regulating the river flow by storage. The progress made in this direction is shown by the fact that the existing storages of this system will hold some 489,000 acre-feet. The completion of works under construction will increase this to 660,000 acre-feet, which. added to 300,000 acre-feet divertible direct from the river, brings the total artificial supply to 960,000 acre-feet.

The Goulburn Scheme was inaugurated by the construction of the diversion work known as the Goulburn Weir, near Nagambie, which was commenced in the year 1887 and completed in 1891. It is built of concrete masonry, backed with coursed granite blocks. It is 695 feet in length over the abutments, exclusive of the space occupied by the channel regulators—a further 230 feet—or 925 feet in all, and raises the summer level of the river about 45 feet, to 408 feet above sea level, the height necessary to command the lands to be irrigated. The weir is provided with 21 flood gates of wrought and cast iron, each gate being 20 feet by 10 feet and weighing 7 tons. To provide a clear waterway for the discharge of floods these gates are lowered into recesses in the body of the structure during high stages of the river flow. The gates are raised and lowered by means of screw-gearing operated by three turbines, the motive power being derived from the river water.

The water is diverted by two main channels, the eastern carrying 660 acre-feet per day a distance of 32 miles to the Shepparton Irrigation District, north of the Broken River, while the western channel, with a capacity of 3,434 acre-feet per day, and a length of 23 miles, supplies the eastern half of the Rodney main channels, and fills Waranga Reservoir, the present principal storage basin of the scheme.

Waranga Reservoir has been formed out of a natural depression 6,000 acres in extent and some 6 feet deep. The construction of an earthen embankment 4¼ miles long formed a reservoir covering about 19 square miles to a mean depth of nearly 21 feet. This work was commenced in the dry year 1902 and completed in 1905 to a capacity of 201,300 acre-feet. The progress of closer settlement and the increasing demand for water led to the enlargement of the embankment so as to raise the water level 10 feet. This work, recently completed, increased the length of the embankment to 4½ miles, the submerged area to 23 square miles, and the storage capacity to 333,400 acre-feet.

Two main channels issue from this reservoir—the Waranga-Rodney—capacity 500 acre-feet per day, which feeds the western half of the Rodney Main Channels, and the Waranga Western Main Channel—98 miles in length—which leaves the reservoir with a capacity of 2,000 acre-feet per day, crosses the Campaspe River as a reinforced concrete syphon, and reduces to 400 acre-feet per day at the Loddon, the present termination. At this junction, an embankment is being formed and a concrete weir provided, with a view to diverting either the flow of the Loddon or water from Waranga Reservoir for the supply of the country to the west of the river.

In view of the continually increasing demand for water in dry seasons, and the repeated requests for extensions of the system, the Commission had investigations made to determine the most suitable site for an additional storage reservoir. After a number of sites had been examined as to foundations, probable storage capacity, and estimated cost, the Commission adopted what is known as the Sugarloaf site, just below the junction of the Goulburn and Delatite Rivers, as the most economical. The first section of the dam, which will be carried to a height of 140 feet above the river bed, has its foundation in places 75 feet below the natural surface. This section will have an over-all length of 3,000 feet, of which 2,300 feet will consist of " rock fill " bank with a reinforced concrete-core wall, the remaining 700 feet being of mass concrete, and forming a flood spillway. The first section of the work will submerge an area of 8,000 acres and permit the storage of 306,000 acre-feet of water, of which about 135,000 can now be impounded, and the design provides that the dam may ultimately be carried to a height of 190 feet from the river bed. The dam so raised would submerge 16,200 acres and impound 918,000 acre-feet. The catchment area above this reservoir is 1,500 square miles. The storing of water was commenced in 1922.

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* Cusecs = Cubic feet per second.

The portion of the State at present served by the Goulburn system comprises 38,700 acres east of the river, 565,000 acres between the Goulburn and the Campaspe, and 284,000 acres between the Campaspe and the Loddon. These areas include the irrigated closer settlements at Shepparton, Stanhope, Tongala, Rochester, Echuca North, and Dingee, as well as the districts formerly controlled by the Rodney and Tragowel Plains Trusts, where the holdings are larger than in closer settlement areas. The main channels of the system have an aggregate length of 200 miles, in addition to which there are 1,800 miles of distributaries, a total for the whole system of 2,000 miles.

The balance of the area, including Deakin District, is provided with a domestic and stock supply, and water is sold for occasional irrigation on application. The amount of the compulsory charge for irrigation water allotted as a " right " is at present 7s. per acre-foot in the two districts—Tragowel Plains and Dingee—farthest removed from the sources of supply, and 6s. per acre-foot elsewhere.

Following strong demands for the extension of existing districts and the provision of an irrigation supply for new areas, the Commission is having the eastern main channel enlarged for its whole length, and extended to command large areas of land north of Shepparton District, and to serve also the suitable lands commanded south of the Broken River. These works are so far advanced that water is being delivered to some of the latter lands, and a new Irrigation District, " South Shepparton, " of 14,000 acres has been constituted, in which water rights will be allotted to one acre-foot of water to each four acres of irrigable land. The Waranga western main channel is being extended to the west side of the Loddon, to improve the supply to Boort District; and a new channel from the Waranga main channel near Tandarra, through Calivil, to the No. 1 main of Tragowel Plains district, is nearing completion. Satisfactory progress has been made with these works, which will have the effect of strengthening existing supplies, and of bringing large areas of new irrigable land under irrigation in the near future.

(c) *River Murray Irrigation Schemes.* The group of irrigation schemes for the service of the districts along the frontage of the River Murray, and drawing supplies direct from that river, ranks next in importance in point of development to the Goulburn Irrigation System. These schemes already supply an area of 372,000 acres, served by 1,600 miles of channels, and are capable of considerable expansion when the Hume Storage Reservoir, now under construction, becomes operative.

The districts supplied are all situated in the portion of the Murray Valley below the town of Echuca, and in an area of comparatively low rainfall. Those between Echuca and Swan Hill, excepting Tresco, are supplied by gravitation, while the Tresco district, and those lower down the river—Nyah, Merbein, Mildura and Red Cliffs—are supplied by pumping.

The present headwork of the gravitation schemes is a weir and lock at Torrumbarry—some 20 miles (by road) down-stream from Echuca—constructed under the powers conferred by the River Murray Waters Acts, the constructing authority being the State Rivers and Water Supply Commission.

This weir was commenced early in 1919 and completed in the latter part of 1923. It raises the summer level of the river by some 16 feet, and thus substitutes continuous diversion for the intermittent diversion hitherto dependent on the varying level in the river, and at the same time provides for the passing of river craft but without offering serious obstruction to the passage of floods.

These objects have been achieved by the construction of a concrete foundation, combined with movable steel trestles, which support stop bars to the height necessary to keep the river at diverting level. In times of flood the bars, and if necessary the trestles themselves, are removed to the river bank.

The effect of this work, as regards irrigation, is the ensuring of a regular supply by gravitation throughout the year to the districts between Torrumbarry and Swan Hill. The districts first benefited by this supply are those known as Cohuna, Gannawarra, Koondrook and Swan Hill, comprising in all 184,000 acres on the river frontage (hitherto dependent on pumping plants during low stages of river flow), and the Kerang districts and adjacent areas, containing about 119,000 acres, more distant from the river, and receiving a more or less irregular supply, by gravitation, from the Kow Swamp Free Headworks. These headworks comprise a gravitation offtake at the effluence from the Murray of the Gunbower Creek, a main channel thence (the Gunbower Creek improved) to Kow Swamp Reservoir, a natural depression improved so as to hold 40,860 acre-feet, and a main supply channel therefrom (the Macorna channel) westward to the Loddon River.

The quantity of water allotted as a "right" in these districts is one acre-foot per irrigable acre. The compulsory charge is at present 6s. per acre-foot of such water rights. In Kerang district—not yet under a compulsory irrigation charge—water is sold to irrigators on application at a charge not exceeding 4s. per acre-foot of water supplied. The districts supplied include the Cohuna, Koondrook, and Swan Hill Closer Settlement Estates, comprising in all 34,000 acres. Of this area 8,000 acres were specially purchased for soldier settlement, the channel systems being correspondingly extended.

In addition to improving the supplies to existing irrigation districts, the Torrumbarry weir will enable large areas adjacent to these districts to be commanded by extensions of existing gravitation channel systems. The most important works so far constructed for this purpose are (*a*) the Gunbower–Cohuna Main Channel, which with the necessary distributaries provides water for irrigation for the new Leitchville area of 10,000 acres situate between Kow Swamp State Works and the Cohuna Irrigation District, and (*b*) the Third Lake Main Channel and distributaries, which convey supplies for the irrigation of some 13,000 acres of land lying between that Lake and the Little Murray River.

Extensions of irrigation schemes dependent on the River Murray, hitherto impracticable owing to lack of storage on that river, will be rendered possible on the completion of the Hume Reservoir. This storage work, now in course of construction jointly by the States of New South Wales and Victoria, is one of the works authorized by the River Murray Waters Acts. Detailed reference to this undertaking will be found at the end of this section.

The irrigation areas supplied by means of pumping, and not commandable by gravitation from the Torrumbarry offtake, stated in geographical order, are the Tresco Irrigation District, the Nyah and Merbein Murray Frontage Settlements, the First Mildura Irrigation Trust District, and the recently established Red Cliffs Soldier Settlement.

The Tresco District of 4,000 acres, created by private enterprise, and recently taken over by the State Rivers and Water Supply Commission, is supplied by water lifted from Lake Boga by pumps throwing 80 acre-feet per day. Its channel mileage is 50. The water supplied is 2½ acre-feet to each irrigable acre, and the compulsory charge at present £2 per acre.

The Nyah Irrigation Area is supplied with water diverted from the Murray by a high-lift pumping plant—capacity, 94 acre-feet per day. The total length of the channels is 51 miles. The settlement contains 3,800 acres, subdivided into 237 holdings of an average area of 15 acres—practically all settled. The settlers include 60 discharged soldiers. Water rights are apportioned to these holdings on the basis of 2½ acre-feet of water for each irrigable acre, and the compulsory charge is at present 20s. per acre-foot of such water rights. The land is devoted mainly to vineyards and orchards, and the settlers, taken as a whole, are making good progress. The value of irrigation to the district is reflected in the selling price of the land, fully planted blocks bringing remarkably high prices.

The Merbein Irrigation Area comprises 8,300 acres, originally Crown lands. This settlement now contains 410 holdings, averaging 20 acres each, practically all settled, the settlers including 166 discharged soldiers. The water is obtained from the Murray by pumps, which deliver 225 acre-feet per day. The main and distributary channels have a combined length of 60 miles. The land settlement conditions and the water rights apportioned are the same as at Nyah, but the compulsory charge is 24s. per acre-foot. The Merbein Works supply also the adjacent Yelta Waterworks District of 32,000 acres.

The Red Cliffs Irrigation Settlement comprises an area of 18,000 acres including the township and 15,000 acres of first class irrigable land adjoining the Mildura Settlement. It is the irrigable portion of the large Red Cliffs estate of 33,000 acres, known as the Debenture Holders' Land, acquired by the State for soldier settlement. The scheme of works for this district, when completed, will rank first in importance among Victoria's pumping systems. It includes a pumping plant capable of delivering 500 acre-feet of water per day, lifted 105 feet, a reinforced concrete rising main 6 feet 6 inches in diameter, 34 chains long, two electric generators each of about 350 k.v.a. capacity, to provide for relifts, and a system of main and distributary channels to command every holding in the district. The three pumping units have already been installed and are in operation. The total length of channels constructed to date is 124 miles, the excavation involved totalling 665,000 cubic yards. Channels having a length of 95 miles have been lined with concrete with the result that 614 blocks, 86 per cent. of the total in the settlement, are protected from seepage from the channels. Some 700 discharged soldiers have been allotted blocks on this settlement. The Red Cliffs township has been proclaimed an urban division of the Irrigation District, and is supplied with the necessary reticulation from a concrete stand pipe 70 feet high and 26 feet in diameter. The Red Cliffs works supply also the adjacent Carwarp and Carwarp Central Waterworks Districts having a total area of 187,000 acres.

The area planted to date consists of 8,000 acres of vines and 600 acres of citrus trees. The first harvest (1924) returned 570 tons of dried fruit, in addition to which large quantities of table grapes were sold for consumption. The 1925 harvest produced about 2,500 tons of dried fruits, and it is anticipated that the yield for the 1926 season will approximate 4,000 to 5,000 tons. A co-operative packing shed recently established handles the bulk of the crop, and is being extended to cope with next season's harvest. In addition, a new factory established by a proprietary company last year processed 600 tons of fruit.

(*d*) *Loddon River Scheme.* This also is wholly a gravitation system, with a regulating weir on the Loddon at Laanecoorie as its headwork. Its storage capacity is 14,000 acre-feet, and other works include timber diversion weirs at Serpentine and Kinypanial, and 160 miles of channels in the Boort district, which supply an area of 74,000 acres for domestic and stock purposes and partial irrigation.

(*e*) *Werribee River Schemes.* (1) *Bacchus Marsh.* The headwork of this gravitation scheme is a reservoir of 15,000 acre-feet capacity on Pyke's Creek, a tributary of the Werribee, the intake from the creek catchment being supplemented by a tunnel through a dividing spur, which taps the Werribee River near Ballan. The area of the district is 6,700 acres—half of which is irrigable and includes some of the richest lucerne land in the State. The annual water right is one acre-foot per irrigable acre, and the present compulsory charge is 22s. 6d. per acre-foot of such right. The higher portion of the district receives a supply for domestic and stock purposes.

(2) *Werribee.* This is another gravitation scheme on the same river, with a reservoir of 17,000 acre-feet capacity at Melton as its headwork. The irrigation district comprises 10,000 acres of first-class land, being the irrigable portion of the Werribee Closer Settlement Estate, which is within 20 miles south-westerly of Melbourne. The water-right allotment is one acre-foot per irrigable acre, and the charge at present is 12s. per acre-foot. The non-irrigable portion of the estate, containing about 13,000 acres, is supplied with water for domestic and stock purposes.

(*f*) *Macallister River* (*Maffra*) *Scheme.* The works of this scheme, the first irrigation scheme in the south-eastern portion of the state, now in course of construction, comprise a storage reservoir on the Macallister River, at Glenmaggie near Heyfield, and a system of main and distributary channels capable of commanding by gravitation some 80,000 acres of the rich river flats along the Macallister, Avon, and Thomson Rivers, near Maffra, Stratford, and Sale. The conditions in these areas as to quality of lands and annual rainfall are similar to those at Bacchus Marsh and Werribee before irrigation. The design of the dam—a large cyclopean concrete structure 1,000 feet in length—provides for the raising of water to a maximum height of 100 feet above the foundations. The catchment area above the dam is 813 square miles and the area submerged at full supply level will be 4,500 acres, while the capacity of the storage will be 150,000 acre-feet, and the unregulated flow of the river will yield an additional 100,000 acre-feet. The construction of the works is well advanced, and it is expected that during the coming year about 50,000 acre-feet of water will be stored, and the settlers on the Boisdale Closer Settlement portion of the district will be supplied with water. The commanded lands are specially suitable for beet culture and dairying, and include some 10,000 acres acquired by the State Rivers and Water Supply Commission for soldier settlement. Outlets for the produce of irrigated farms are already provided by the sugar, butter, and condensed milk factories, which are within easy reach; while the proximity to railway stations ensures to settlers the necessary transport facilities.

(iii) *Domestic and Stock Schemes.* (*a*) *General.* The second division takes into account the schemes constructed and under construction for the supply of water for domestic and stock purposes, the capital expenditure on which at 30th June, 1925, was £6,843,000. The area of country lands artificially supplied with water for these purposes is 22,214 square miles. The number of towns supplied, exclusive of the City of Melbourne and its suburbs, is 193, serving an estimated population of 355,370. In addition to the Commission's districts, some large areas are still administered by local authorities.

(*b*) *Wimmera-Mallee System.* The principal scheme in this division is that known as the Wimmera-Mallee Gravitation Channel System. This comprehensive scheme of works will compare favourably, it is believed, with any similar individual scheme for domestic and stock service, in any part of the world. The main supply is drawn from four reservoirs in the catchment area of the Wimmera River, at the foot of the Grampians Ranges, viz. :—Lake Lonsdale, Wartook, Fyans Lake, and Taylor's Lake. The reservoirs in use, including some minor works, have a combined storage capacity of 152,000 acre-feet. The completion of the works in progress will bring this total to 212,000 acre-feet. The water is conveyed partly by natural water-courses but chiefly by artificial channels aggregating 5,000 miles in length over farming districts comprising about 11,000 square miles, approximately one-eighth of the whole State (see Official Year Book No. 13, map on page 562).

(*c*) *Northern Mallee Water Supply Scheme.* In what is known as the northern Mallee, an area of about 1,250,000 acres, adjoining the Wimmera-Mallee Gravitation Channel System, but above its channel level, the Commission has provided a water supply for the large wheat holdings in the Walpeup and adjoining districts, by means of bores and large public tanks. The number of successful Government bores in use in this area is 97, their average depth being 460 feet. There are also 193 tanks, having a total capacity of 1,032,500 cubic yards, or 174 million gallons.

(*d*) *Carwarp Scheme.* The works of this scheme—a system of distributary channels—were constructed to provide domestic and stock supplies for an area of 187,000 acres of Mallee lands situated immediately south of the Red Cliffs Irrigation District and traversed by the Mildura Railway, the supply being drawn from the Red Cliffs pumping station. The whole of this area was at first embraced within the Carwarp Waterworks District, but, subsequently, an improved supply was given to some 15,000 acres around the railway station, and above the general level of the surrounding country, by means of a pump and rising main, with 12 miles of channels. The high lands so supplied have been constituted the Carwarp Central Waterworks District.

(*e*) *Millewa Scheme.* This recent and important addition to Victoria's water supply schemes for domestic and stock purposes is designed to serve 1,000,000 acres of the extreme northern Mallee between the Mildura railway and the South Australian border, which is being opened up for settlement by this water supply scheme, and the construction of 55 miles of railway from Red Cliffs westward toward South Australia. The water for this extensive area will be drawn from the River Murray. The scheme comprises two main lifts, of about 125 and 150 feet respectively, the first lift being from Lake Cullulleraine on the flats 5 miles from the Murray. This lake, the main storage of the scheme, which holds 2,000 acre-feet, will be filled from No. 9 Lock now in course of construction. Holdings aggregating 350,000 acres have already been allotted to 421 settlers, and, for the service of this area, 317 miles of channels have been excavated, and 14 earthen storages, with a combined capacity of 250,000 cubic yards, have been constructed at convenient distances from railway stations. The first unit of the pumping scheme and the rising main having been completed, water was turned into the channels and storages early in 1924, and in May and June of that year the whole occupied area received a supply of water by channel. The extension of the pumping stations to their final capacity is being proceeded with. The construction of the remaining works of the scheme will precede the throwing open of additional lands for settlement. In this area and the adjacent Sunset country, 80 tanks have been constructed with a total storage capacity of 110,700 cubic yards.

(*f*) *The Coliban System* comprises two main storage reservoirs on the Coliban River, on the northern slope of the Dividing Range, the " Upper Coliban " with a capacity of 22,500 acre-feet, and " Malmsbury " with a capacity of 12,300 acre-feet, together with main and distributary channels aggregating 340 miles in length, 23 subsidiary reservoirs, and 300 miles of urban pipe reticulation. This scheme supplies water for domestic and stock purposes to the city of Bendigo, also to Castlemaine, Maldon, and eighteen other townships, and the interjacent rural districts, containing in all some 235,000 acres. The population served is 61,000. This system also supplies the demands of the quartz and sluice mining industries throughout this area, and provides water for irrigation for orchards, market gardens and similar purposes, the area irrigated annually being about 6,000 acres.

(*g*) *Naval Base and Mornington Peninsula Scheme.* Another scheme in this division which calls for mention here is the Naval Base and Mornington Peninsula Scheme. This comprehensive scheme—prepared at the request of the Naval Authorities—is for the supply of water to the Flinders Naval Base, and for the service of fifteen townships *en route*, including Berwick, Beaconsfield, Pakenham, Aspendale, Chelsea, Carrum, Frankston, Mornington, and Hastings. An ample supply of water is obtainable both for ordinary domestic and stock use and for market gardening, in the vicinity of Dandenong, from the headwaters of the Bunyip River, which drains some 30 square miles of forest country above the point of off-take. The works are so far advanced that water is already being delivered at the Naval Base, and to the townships of Mornington, Frankston, Carrum, Aspendale, and the intervening bayside resorts, as well as the inland townships of Beaconsfield, Berwick, Cranbourne, Somerville, and Bittern.

The scheme has been extended to supplement the supply to the township of Dandenong hitherto controlled by a local Trust, the works of which were recently transferred to the Commission, which will administer them as part of the general scheme.

An important development of this scheme was the purchase by the Commission of 3,300 acres of land in the vicinity of Narre Warren, on the main Gippsland railway, for closer settlement under irrigation. This land, which is within about 25 miles of the metropolis, is being subdivided into blocks of 10 to 15 acres, suitable for market gardening and other forms of intensive culture. Drainage works will be provided where necessary, and every block will receive a satisfactory supply of water under pressure from a pipe system connected with the main race. Electricity for all purposes will be available from the works of the Electricity Commission. The land is being settled under the ordinary closer settlement conditions, and there is a good demand for the blocks.

(*h*) *The Kerang North-West Lakes Works* consist of a chain of lakes, situate a few miles to the north-west of Kerang, connected by channels to each other and to the Loddon River, and improved so as to be capable of storing 88,500 acre-feet of water. This system serves, for domestic and stock purposes, an area of 40,000 acres, constituted the " Kerang North-West Lakes Waterworks District," When the supply from the Loddon River is insufficient, the lakes are filled by gravitation from the Torrumbarry Weir, on the River Murray, via the Kow Swamp Irrigation Works. The water is diverted along Sheepwash Creek—an improved natural effluent from the Loddon—the river level having been raised by a concrete weir at Kerang. As in the Coliban District, limited quantities of water are sold on application for irrigation purposes, about 5,500 acres having been irrigated annually from this source for some years. These irrigation facilities have been so appreciated that, in response to a strong demand, an irrigation District of 18,000 acres (" Mystic Park ") has been constituted on the west of the Lakes, and further works have been constructed to provide an irrigation supply to some 13,000 acres lying to the north of " Third Lake." This area has also been constituted an Irrigation District in which water rights will be allotted on the basis of one acre-foot of water to each acre of irrigable land.

(*i*) *The Broken River Works* comprise two weirs—" Casey's " and " Gowangardie "—above Shepparton, and offtake works therefrom, for the diversion of water into the channels of the Tungamah, Shepparton, and Numurkah Waterworks Trusts.

(*j*) *The Wonthaggi Works* comprise a storage reservoir on Lance Creek, capacity 421,000,000 gallons, a main pipe line therefrom 9 miles in length to the coal-mining town of Wonthaggi, a service reservoir—capacity 1,400,000 gallons, and 18 miles of pipe reticulation for the service of that town. The population supplied is 5,000, and there is a service to the State Coal Mine and Railways Department.

(iv) *Flood Protection.* The Water Acts of Victoria provide for the constitution of Flood Protection Districts, in which the residents are rated for schemes carried out for their benefit. The works are constructed, and districts administered by the State Rivers and Water Supply Commission, and the Commission is carrying out extensive schemes at Koo-wee-rup and Cardinia, in the south-eastern portion of the State, at Loch Garry and Kanyapella on the Goulburn River between Shepparton and Echuca, and works on a smaller scale at the town of Echuca.

The Koo-wee-rup and Cardinia Flood Protection Districts together embrace the whole of a large continuous depression south of the main Gippsland railway and along the sea-board of Westernport, containing in all about 100,000 acres of very fertile country, the proper development of which was seriously retarded by periodical inundations. A large portion of the land was reclaimed, subdivided, and settled by the State, but it became evident, during periods of heavy rainfall, that only a comprehensive drainage scheme for the whole area affected would afford the needed protection from flooding.

At the request of the settlers, the Commission prepared schemes for this purpose, and, after the concurrence of the settlers had been obtained, practically carried the schemes into effect; and the two large districts above-mentioned were constituted, and are now being rated on an acreage basis in respect of benefits derived from the works. The Commission's works are now well advanced, and provide flood protection from all but abnormal floods, and the duration of even these is considerably shortened and their effect correspondingly lessened as the result of the works, which consist of the substantial enlargement and remodelling of most of the existing principal drains, the construction of new internal drains, and the cutting of several distinct outlets, thus avoiding concentration of flood waters in the main drains.

The Loch Garry Flood Protection Works comprise about 5½ miles of earthen levee banks around Loch Garry, and a concrete regulator and spillway 400 feet in length, to control overflows from the Loch. The purpose of the scheme is to protect some 40,000 acres of lands previously flooded by overflows of the Goulburn River by way of Loch Garry and Bunbartha Creek. The Kanyapella Scheme provides for the conservation of a domestic and stock supply in Warrigal Creek, and the exclusion therefrom of certain flood waters. The area benefited is 13,500 acres. Both schemes have been approved of by a majority of the land holders concerned and are now in operation.

(v) *Mildura.* The Mildura Irrigation Scheme is controlled by the First Mildura Irrigation Trust, and water is obtained by pumping from the River Murray. The area of the settlement is 45,000 acres, of which 14,000 acres are under intense culture, vines predominating. During the year ending 30th June, 1925, the Trust's receipts aggregated £43,774, and its expenditure £46,334; whilst loans—exclusive of £9,159, arrears of interest—advanced by the Government amounted at 30th June, 1925, to £95,868. The number of water-acres supplied during the year was 39,212.

4. **Queensland.**—The main irrigation works in Queensland are as follows:—

(i) *Dawson Valley Scheme.* The Dawson Valley Irrigation Scheme, now under construction, comprises:—(*a*) A concrete dam at Nathan's Gorge, some 30 miles below the town of Taroom, to impound 2,500,000 acre-feet of water: (*b*) an offtake weir 27 miles down stream for the diversion of water for the irrigation of 200,000 acres in the Dawson Valley.

The Dawson River rises in the Great Dividing Range. The catchment above the proposed Nathan Dam is 9,000 square miles, over which the average annual rainfall is 27 inches. An arched dam is involved, with termini on lines tangential to the curve. The rock forming the foundations is a hard sandstone, the crushing strength of which ranges from 3,000 to 5,000 lb. per square inch. It is designed to fix the water level 130 feet above summer water level at the site, and the crest height at 140 feet, with a spillway on the right bank. The crest length of the dam will be 860 feet, 500 feet on the curved portion. The reservoir will be the largest artificial storage in the world.

The main canal is being given a fall of 1 foot per mile, and water for irrigation purposes can be diverted from it shortly after leaving the regulating weir.

The irrigable lands are of a good agricultural type, suitable for irrigation, with good capillarity, ample humus, and containing liberal amounts of all mineral plant foods in readily available form. About 120,000 acres are commanded on the eastern side of the river, and 80,000 on the western side. It is proposed to construct a hydro-electric station at the Nathan Dam to utilize the water power to irrigate high level lands not commanded by gravitation, provide stock and domestic supplies to dry areas, power for factories, and light throughout the settlement.

The Dawson Valley is situated in the Central Division of the State, which comprises 209,340 square miles, or nearly one-third of the total area of Queensland. The population is less than one person to two square miles, and subtracting those resident in the principal towns, the ratio is one inhabitant to four square miles, although there is only a comparatively small proportion of inferior land in the whole area. This irrigation scheme not only provides an opportunity for increasing population and extending agriculture, but will also form a fodder reserve area for pastoral lands where rainfall is insufficient for agriculture, and water conservation impracticable. A fodder conservation proposal is being considered for the early stages of settlement with this end in view, and to give settlers an opportunity to readily dispose of some of their produce.

A railway line is in course of construction through the irrigation areas from the present terminus of the Dawson Valley line at Baralaba.

In order to minimize heavy interest charges accruing during the process of construction, the project has been designed on the zone system, by which one area is prepared for settlement and completed before the next zone is proceeded with. Five zones have been designed, each averaging 40,000 acres of irrigated land attached to a similar acreage of dry lands. The dry lands, however, are attachable to the outer ring of farms only, and will be allotted in proportion to irrigated land held. The farms grow smaller as the centre of the zone is approached, till the unit of 12½ acres is the standard immediately adjacent to each central town. Though forming an integral part of the gravitation system, each zone will be a separate entity, served by its own central township, and in close connexion with the Dawson Valley railway system now under construction.

(*c*) *Nathan Dam.* Preliminary work in connexion with the Nathan Dam has been completed by a geological examination of the site of the dam and the basin generally; the beds being found practically free from jointing and favourable to dam construction and water storage. An access road between railhead at Juandah and the dam site 54 miles in length, is now under construction. The assembling of construction plant and equipment for dam construction is being effected whilst this work is in progress, and the actual work on the dam will be commenced about 1st July, 1926.

(*d*) *Castle Creek Zone.* Although the construction of the main dam at Nathan Gorge and the offtake weir and regulator at Delusion Creek are in the initial stages only, an area of some 5,000 acres of the first or Castle Creek section is ready for settlement, as a result of the erection on the river bank of a temporary pumping plant consisting of a 400 h.p. triple expansion engine, and a double drum B. and W. boiler operating two 16-in. centrifugal pumps, capable of pumping 9,000 gallons of water per minute. The main and subsidiary canals, together with the necessary drainage channels of this section were completed in December, 1924.

It was considered advisable to defer the settlement of this area until railway communication had been established. This is complete to within 25 miles of the central town, which has been named Theodore, as an acknowledgement of the work of the late Premier of Queensland in furthering this project. On 30th June, 1926, the railway is expected to be sufficiently advanced to justify bringing in settlers. In addition to the 5,000 acres of irrigable land in this first section to be thrown open, some 25,000 acres of adjoining dry lands have been subdivided for allotment at the same time. Each of the outer ring of irrigable farms has a dry area attached, the size of the areas being from 250 to 1,000 acres in extent. Some of this is good vine scrub land, and is all classed as soil suitable for agriculture, on which dry area products such as wool, butter, cotton, etc., can be raised in conjunction with an irrigation farm, as an insurance over dry periods. This rich country back from the river flats is expected to form a great attraction to settlement. The pumping station established on the river operated satisfactorily during the past year. The river bank at this point is higher than the surrounding 5,000 acres, so that when the water is pumped up, the channels radiating from the Power Station carry it by gravitation.

(ii) *Inkerman Irrigation Area.* This area is situated at Home Hill, Ayr district, using the waters of the Burdekin River, with electrically operated shallow well pumps. The number of wells and pumps is 230, and the acreage under irrigation at the end of 1924 was 5,000. Provision is being made to increase this area to 10,000 acres.

(iii) *Other Schemes.* Smaller schemes include Townsville (wells, creek, and river); Rockhampton (wells, river, creek, etc.); those at Bingera, near Bundaberg, which utilize water pumped from the Burnett River just above the point of meeting of the salt and fresh waters; and those at Fairymead, which utilize water pumped from a number of shallow spear wells sunk on the alluvial flats on the north side of the Burnett River and about 6 miles from Bundaberg.

5. **South Australia.**—(i) *The Renmark Irrigation Trust.* The Renmark Irrigation Trust was established on similar lines to Mildura, but on a smaller scale. The area of settlement is 23,000 acres, and the irrigated area 7,700 acres. The population of the town and settlement is 4,800. Water is obtained from the Murray by pumping. The main pump situated on the river bank lifts the water into a large lagoon, from which three further pumps of 17 feet, 26 feet, and 27 feet-lift raise the water and irrigate 950, 4,200, and 1,800 acres respectively. A fifth pumping plant again lifts the water 26 feet and irrigates 750 acres. The total length of the channels is 78 miles, and of roads 98 miles, while the annual water rate is £2 15s. 0d. per acre. It is anticipated that when Murray locks 4 and 5 are completed, it will be possible to gravitate the water into the lagoon, and plans are on foot for the establishment of a central power station and the gradual electrification of all the pumping plants. Cultivation on the settlement is as follows: Sultanas, 2,441 acres; currants, 1,335 acres; gordos, 922 acres; doradillos and wine grapes, 404 acres; pears, 155 acres; apples, 8 acres; apricots, 292 acres; peaches and nectarines, 109 acres; citrus fruits, 438 acres; figs, 11 acres; prunes, 7 acres; olives, 39 acres; miscellaneous fruits, 16 acres; and balance in fodder crops. The approximate production for 1925 was as follows:—4,150 tons of dried fruit, and 4,200 tons of grapes, which were supplied to the distilleries. In addition, several hundred tons of fresh pears were sent to canning factories in Adelaide, and 40,000 cases of oranges were packed. The most up-to date and largest fruit-packing shed in the State is situated at Renmark, and is co-operatively owned, as is also a large distillery for the manufacture of grape spirit. There are several private packing sheds and a private distillery.

(ii) *Other Waterworks.* A number of country water-works is under the control of the Public Works Department. As, however, they are not irrigation works properly so called, but are used for supplying water for domestic purposes, etc., to several towns, no further reference will be made to them in this chapter. (See chapter on Local Government.)

(iii) *Areas under Irrigation.* The Irrigation Areas on the River Murray above Morgan under Government control up to the end of February, 1926, contained 19,330 acres of irrigable land, allotted to 1,075 settlers, including 596 returned soldiers. The pumping plants at present installed or being installed on these areas aggregate 7,653 brake horse-power, with a pumping capacity of over 12 million gallons per hour.

The *Cadell Irrigation Area* is 7 miles by river above Morgan, and comprises 2,727 acres, of which 1,168 are irrigable. Blocks have been allotted to 72 soldier settlers and 4 civilian settlers. The area is suitable for fruit growing. The pumping plant is a 190 b.h.p. steam plant, with a capacity of 4,200 gallons per minute against a head of 75 feet. This area was first allotted on 30th September, 1919.

The *Waikerie Irrigation Area* is 39 miles above Morgan by river, and includes the old Waikerie and Ramco settlements. The total area is 9,300 acres, of which 3,387 acres are first class irrigable land, growing fruit trees and vines. The area allotted is divided between 159 settlers, 13 of whom are soldiers, the first allotment taking place on 5th July, 1910. The pumping plant consists of five units, four suction gas and one steam unit, with a total of 1,300 b.h.p. The capacity of the plant is 17,000 gallons per minute against a total head of 140 feet.

The *Holder Scheme* adjoins the Waikerie Irrigation Area, and has been incorporated as a portion of the latter. It contains 471 acres of irrigable land, and 1,890 acres of dry land. Blocks have been allotted to 37 settlers, including 19 soldier settlers. An area of 115 acres of the irrigable land has been subdivided into 42 small allotments, of which 37 have been allotted. The pumping plant consists of two steam units, with a total of 238 b.h.p., and a capacity of 3,750 gallons per minute against a total head of 115 feet. An adjoining irrigable area of 110 acres, held by Holder Ltd., is also irrigated by this plant.

The *Kingston Irrigation Area* is situated 75 miles above Morgan by river, and comprises the old village settlement of that name. It has a total area of 3,748 acres, of which 480 acres are irrigable. The area was allotted to 30 settlers in July, 1914, and is used for fruit and vine culture. The water is pumped by a 130 b.h.p. steam plant with a capacity of 2,000 gallons per minute against a total head of 114 feet.

The *Moorook Irrigation Area*, adjoining the Kingston Area, contains 5,970 acres of land, of which 662 acres are irrigable. Altogether 616 acres of irrigable land have been allotted to 38 settlers, of whom 16 are soldier settlers. The first allotment took place in March, 1916. This area is irrigated by a 430 b.h.p. steam plant of two units, with a capacity of 7,160 gallons per minute against a total head of 120 feet.

The *Cobdogla Irrigation Area* is on the opposite side of the river to Kingston and Moorook Areas. It was formerly a sheep station held under pastoral lease, and was resumed by the Government for irrigation purposes. The total area of the station was 160,000 acres, of which 23,400 acres had been set apart as the Berri Area, and the remaining 136,600 acres as the Cobdogla Area. The latter area includes Lake Bonney, 4,000 acres in extent. This lake is situated 3 miles inland from the Murray from which it is kept partially filled by Chambers Creek, now that No. 3 Lock is in operation.

The Cobdogla Area contains about 30,000 acres of land capable of being irrigated. It is divided into 5 areas, viz., the Cobdogla, Nookamka, Loveday, McIntosh, and Weigall divisions.

The Cobdogla division has been developed as a low-lift area, the pumping head being about 34 feet, to irrigate 1,669 acres of land, suitable for vine and fodder growing. An irrigable area of 1,057 acres has been allotted to 42 settlers, including 4 soldiers.

The Nookamka division, south of Lake Bonney, has an irrigable area of 2,416 acres, of which 2,003 acres have been allotted to 121 soldier and 8 civilian settlers. The first allotment took place on 16th March, 1922.

The Loveday division has an irrigable area of 9,324 acres, divided into 579 blocks. The construction work on this area has been completed, and 683 acres have been allotted to 43 soldier settlers. The reticulation is by means of concrete pipe lines, for both main and branches, instead of open channels.

Pumping plants have been installed on the Cobdogla, Nookamka, and Loveday divisions. On the Cobdogla division a 240 b.h.p. steam plant with a capacity of 16,700 gallons per minute has been installed. Two "Humphrey" gas pumps are in course of installation with a combined capacity of 47,600 gallons per minute. These pumps will shortly be tested. The Nookamka division has two steam units, totalling 640 b.h.p., with a capacity of 12,500 gallons per minute. The Loveday division has a 300 b.h.p. plant, with a capacity of 6,000 gallons per minute; two other units have been installed of 1,315 b.h.p., with a total pumping power of 39,300 gallons per minute.

The *Berri Irrigation Area* is 120 miles above Morgan by river, and contains a total area of 23,400 acres, of which 7,834 acres is suitable for fruit and vine culture. A total of 7,465 acres of irrigable land has been allotted to 430 settlers, of whom 234 are soldier settlers. An area of 80 acres of the irrigable land is used as an experimental farm. The first allotment of the older portion of this area took place in January, 1911. The pumping plant consists of five units, three suction gas and two steam units, with a total of 2,250 b.h.p., and a capacity of 42,500 gallons per minute against total heads varying from 50 feet to 120 feet.

The *Chaffey Irrigation Area* comprises a large area of country adjacent to Renmark. Preliminary survey work has been carried out over 14,000 acres of prospective irrigable land. A portion of this area, known as the Ral Ral Division, containing 1,725 acres, has been subdivided into 125 blocks, 74 of which have been allotted to 60 settlers, 56 being soldier settlers. A pumping plant of 220 b.h.p., with a capacity of 12,500 gallons per minute against a total head of 30 feet has been installed.

The *Irrigation and Reclaimed Swamp Areas* under Government control on the River Murray below Morgan contain 10,161 acres, i.e., 1,212 acres of high irrigable and 8,949 acres of reclaimed swamp land, allotted to 265 settlers, of whom 45 are soldier settlers. The former land is irrigable by pumping, and the latter by gravitation. Pumping plants installed total 1,546 b.h.p., with a capacity of 4½ million gallons per hour.

Mobilong and Burdett Divisions of the Murray Bridge Irrigation Area, adjoining Murray Bridge, contain 585 acres of irrigable reclaimed fodder land with 46 settlers.

Long Flat and Monteith Flat below Murray Bridge have between them a reclaimed irrigable area of 1,341 acres, of which 1,200 acres have been allotted to 55 settlers.

Swanport Area below Murray Bridge has 192 acres of fruit and fodder land.

The *Jervois Irrigation Area* is divided into four divisions, i.e.—

Jervois Division is 15 miles below Murray Bridge, and includes 1,052 acres of irrigable reclaimed land, of which 572 acres have been allotted to 12 civilian and 4 soldier settlers.

Woods Point Division is 12 miles below Murray Bridge, and contains 1,104 acres of irrigable reclaimed land, of which 704 acres have been allotted to 1 soldier and 20 civilian settlers.

Wellington Division is 18 miles below Murray Bridge, and has an area of about 1,627 acres of irrigable reclaimed land. Provision is being made for 26 settlers.

There are 9,105 acres of dry land in this area to be allotted to the settlers on the reclaimed land for grazing and cultivation purposes.

The *Mypolonga Area* is 9 miles above Murray Bridge, and has a river frontage of 7 miles. The total area of this settlement is 5,800 acres, of which 939 are irrigable, and 1,345 acres irrigable reclaimed land. The ares has 92 settlers, of whom 15 are soldiers.

The *Pompoota Area* is situated 13 miles above Murray Bridge, and was previously used as a Training Farm for prospective soldier settlers. The area contains 4,127 acres, of which 186 acres are fruit and 410 acres irrigable reclaimed land. Blocks have been allotted to 15 soldier settlers.

The *Wall Area*, 16 miles above Murray Bridge, has 455 acres of irrigable reclaimed land. Ten soldiers are settled on the area.

The *Neeta and Cowirra Irrigation Areas* are 20 miles above Murray Bridge, and contain 1,077 acres of irrigable reclaimed swamp land. These areas are ready for allotment. At present 10 settlers have been placed on the blocks.

The *Baseby Area* is about 21 miles above Murray Bridge, and has an area of 1,350 acres.

The reclaimed lands consist mainly of peaty soils composed of rich river silt, and are eminently suitable for the growth of lucerne and other fodders, onions, potatoes, etc. The soils of the irrigable lands have already proved their suitability for the production of peaches, apricots, nectarines, oranges, lemons, figs, and grapes.

(iv) *Allotment of Irrigated Land.* All lands are allotted under perpetual lease, and blocks are surveyed into areas varying up to 50 acres of irrigable or reclaimed land. No lessee is permitted to hold more than 50 acres of irrigable or reclaimed land, or of both irrigable and reclaimed, except that in the case of a partnership 50 acres may be allotted for each member of the partnership up to a maximum of 150 acres.

In addition, areas of non-irrigable land are allotted to lessees of irrigation and reclaimed blocks for dry farming. The rentals of the blocks are fixed by the Irrigation Commission immediately prior to the land being offered for application. For the reclaimed land an amount is charged sufficient to cover interest on cost of the land, the survey thereof, and interest on cost of the levee ; while for the irrigable land the rent is based on the unimproved value of Crown lands, or to cover interest on cost of repurchased lands.

On the irrigable land, the present rate is 60s. per acre per annum. On the reclaimed lands an amount is charged to meet the annual management, drainage, maintenance expenses, and certain interest charges, the present rate being 30s. per acre. A sliding scale covers the rent on all land and water rates on the irrigable land for the first four years, i.e., first year, one-quarter of the full rent and water rates ; second year, one-half ; third, three-quarters ; fourth and afterwards, full amount, per acre. On the irrigable lands each lessee is entitled for the water rates to 24 acre-inches per annum, supplied in four irrigations; special irrigations and domestic supplies are available at times other than during the general irrigation at a nominal cost. On the reclaimed lands, water is supplied regularly by reticulation from the river.

Liberal assistance is provided by the Government to lessees of irrigation blocks. Apart from the erection of pumping plants, construction of main channels and other work necessary to render the land ready for occupation, the Irrigation Commission has power to carry out improvements in the nature of clearing, channelling, fencing, etc. The lessee on allotment is required to take over any expenditure so incurred, and to pay an amount of not less than 15 per cent. of the cost of the work. Subsequent to allotment the Commission has power to expend a sum not exceeding £30 per acre of the irrigable land in any lessee's block in making the following improvements, or any of them:—Fencing, clearing, grading, constructing irrigation channels, drains and tanks thereon, and connecting such channels or drains with the nearest main channel or drain. The lessee is required to pay a deposit before the work is commenced equal to not less than 15 per cent. of the Commission's estimate of the cost of carrying out such improvements. The Commission may also make cash advances to any lessee for all or any of the following purposes:—

(*a*) For carrying out improvements and the erection of buildings to the extent of the estimated value of the lease and improvements already made or in course of being made thereon, but not exceeding £650.

(*b*) For the purchase of implements, stock, seeds, plants, trees, etc., to any amount not exceeding £200.

(*c*) For any other purpose that may be approved by the Commission, but not exceeding three-fourths of the estimated value of the lease and any improvements already made thereon.

The total amount that may be expended or advanced, however, for all or any of the above purposes, including improvements carried out by the Commission, shall not exceed in aggregate the sum of £600, or £30 per acre of the irrigable portion of the land, whichever sum is the greater.

All expenditure incurred by the Commission in improving the land either before or after allotment, or advanced to the lessee to carry out further improvements, must be repaid under the following conditions:—For the period of 5 years following the date on which the expenditure was incurred or advances made, the lessee shall pay interest on the amount at current rates. After the expiration of 5 years, the lessee is required to repay the amount expended or advanced by 70 equal half-yearly instalments, together with interest at current rates on the balance remaining unpaid.

6. **Western Australia.**—In this State an Irrigation Act provides for the constitution of irrigation districts. At Harvey, works for irrigating about 4,000 acres devoted to fruit growing, principally oranges, were opened on the 21st June, 1916. A scheme is now in preparation for irrigating a further area in the same district.

Numerous small private irrigation schemes are in full operation on many of the south-west rivers, in connexion with fruit, fodder, and potato growing.

7. **Murray Waters.**—(i) *River Murray Agreement.* The River Murray Agreement, entered into by the Governments of the Commonwealth and the States of New South Wales, Victoria, and South Australia in 1914, and which was brought into operation by proclamation on 31st January, 1917, provides for the construction of the following works:—

The Hume Reservoir,
The Lake Victoria Storage,
26 Weirs and Locks in the River Murray between Echuca and Blanchetown, and
9 Weirs and Locks in the River Murrumbidgee, or, alternatively, at the discretion of the Government of New South Wales, in the River Darling.

(The Government of New South Wales decided in favour of the construction of these weirs and locks in the River Murrumbidgee.)

The Agreement provides that the construction of these works shall be undertaken by the Governments of the three States—the Hume Reservoir and 17 weirs and locks between Echuca and Wentworth, including that at Wentworth, to be constructed by the Governments of New South Wales and Victoria severally or jointly, as may be mutually agreed upon by them; the 9 weirs and locks in the River Murrumbidgee to be constructed by the Government of New South Wales; and the Lake Victoria Storage and 9 weirs and locks in the River Murray below Wentworth by the Government of South Australia.

The River Murray Commission, appointed in pursuance of the Agreement referred to, and comprising a representative of each of the four contracting Governments, is charged with the duty of giving effect to the Agreement and the River Murray Waters Acts.

The Agreement directs that the Governments of the three States shall submit to the Commission a general scheme of the works to be undertaken by them respectively; and further, that before the commencement of any particular work, designs and estimates in relation thereto shall be forwarded to the Commission for approval by that body.

(ii) *Amendment of the Agreement.* As a result of proposals placed before the Conference of Premiers which met on 25th May and 20th July, 1920, and the discussions which took place thereon, an agreement, providing for the amendment of the River Murray Agreement of 1914, was entered into by the four contracting Governments on 23rd November, 1920. In the Agreement as so amended it was proposed that the construction of all works covered by the River Murray Scheme should be placed under the control of the River Murray Commission in lieu of the three Constructing Authorities as provided for in the Agreement of 1914. It was also provided that the four Contracting Governments should contribute towards the cost of the scheme in equal shares, and that all plant required for the construction of works should be purchased by the Commission from funds provided by the four Contracting Governments. The Parliaments of the Commonwealth and the States of Victoria and South Australia passed legislation giving effect to the amendments proposed. As the Parliament of New South Wales did not, however, pass the Agreement in the terms approved by the four Contracting Governments, the amending Agreement in question was not ratified.

Following upon a Conference of Ministers representing the four Contracting Governments, which assembled in May, 1923, an agreement was entered into by the four Governments, providing for the variation of the 1914 Agreement, as follows:—

(1) The Weir and Lock at Wentworth, one of the 17 weirs and locks set down in the 1914 Agreement for construction between Echuca and Wentworth, to be constructed by the Governments of New South Wales and Victoria at a site below the junction of the Rivers Murray and Darling.
(2) The construction of works which will provide for the needs of irrigation to have precedence over the construction of any works which will be primarily for the requirements of navigation.
(3) All tolls collected at the various weirs and locks to be distributed in equal proportions among the three Contracting States.
(4) The period of seven years referred to in Clause 44 of the Agreement relating to the distribution of waters following upon the completion of the Upper Murray Storage to be extended to twelve years; the amount of water to be allowed to pass for supply to South Australia in the meantime to be determined by a three-fourths majority of the River Murray Commission.
(5) The Commonwealth Government's contribution towards the cost of the works covered by the River Murray Agreement to be increased from £1,000,000 to a quarter share, upon the understanding that it is the intention to carry out the original agreement subject to any modifications thereof as are at any time mutually agreed upon by all the Contracting Governments.

This amending Agreement was subsequently ratified by the four Parliaments concerned, and came into operation as from the 16th November, 1924.

(iii) *Works.*—(*a*) *General.* The whole of the works which have been put in hand to date, with the exception of the weir and lock at Blanchetown, which work was commenced before the Agreement came into operation, and which was in that Agreement specifically exempted from the provisions thereof, have been constructed, or are being constructed, in accordance with designs approved by the River Murray Commission.

The following are the works which have been put in hand :—

The Hume Reservoir,	By the Governments of New South Wales and Victoria.
Weir and Lock at Torrumbarry (near Echuca),	
Weir and Lock No. 11 (Mildura),	
Weir and Lock No. 10 (Wentworth), a little below the junction of the Rivers Murray and Darling,	
The Lake Victoria Storage,	By the Government of South Australia.
Weirs and Locks Nos. 1, 2, 3, 4, 5, and 9,	

(*b*) *The Hume Reservoir.* The site of the Hume Dam, which is being constructed jointly by the Constructing Authorities for New South Wales and Victoria, is located a little below the junction of the Rivers Murray and Mitta Mitta, where the reservoir will receive the run-off from a catchment of 6,000 square miles of mountainous country.

The original designs prepared in connexion with this work provided for a reservoir with a capacity of 1,100,000 acre-feet, and the work was put in hand on both sides of the river in accordance with such designs.

The question of the advisability of utilizing the Hume Reservoir works for the purpose of hydro-electric generation having been placed before the four Contracting Governments, a Conference of Engineers representative of each of those Governments was convened to investigate the matter, and to inquire into and report upon the question as to whether the reservoir could with advantage be enlarged.

The following estimates of cost of reservoirs of different capacities, including provision for special outlets for power, were furnished to the Conference :—

Capacity in Acre-feet.	Estimate of Cost.
1,100,000	£2,577,000
1,400,000	2,856,000
1,500,000	3,000,000
1,700,000	3,225,000
2,000,000	3,486,000

The report and recommendations of the Conference referred to were subsequently considered by a Conference of Ministers representing the four Governments, the result of which Conference was the adoption of the following resolutions :—

(1) That this Conference is of opinion that provision should be made for outlet works at the Hume Reservoir suitable for the purpose of hydro-electric generation in addition to the purposes set out in the River Murray Agreement, provided that the use of the reservoir for such generation of power will not in any way interfere with the output therefrom of the volumes of water required for the purposes set out in the River Murray Agreement.

(2) That the cost of such additional works, estimated at £40,000, should be borne in equal shares by the Governments of New South Wales and Victoria, which Governments should have the sole use of any power generated at the reservoir.

(3) That the Commonwealth Government be requested to give a formal assurance that no claim will be made under clause 10 of the first schedule of the *Seat of Government Surrender Act of* 1909 to any electricity that may be developed at the Hume Reservoir in connexion with the proposed works or any other works which may be established there.

(4) The work of construction of the Hume Dam, of sufficient dimensions to provide for a reservoir of 2,000,000 acre-feet, proceed for a period not exceeding three years, and that the question of the ultimate capacity and completion of the reservoir be then the subject of a further conference of Ministers representing the four Contracting Governments ; provided that if the reservoir be increased above the capacity of 1,100,000 acre-feet it be understood that the additional water shall be used for meeting the present allocation obligations under the River Murray Agreement and as a reserve for dry years, such reserve to be used at the discretion of the River Murray Commission.

These resolutions having been concurred in by the four Contracting Governments, amended designs were prepared by the Constructing Authorities for New South Wales and Victoria, providing for a storage of 2,000,000 acre-feet capacity. These designs were approved by the River Murray Commission, and the work is now proceeding in accordance therewith pending further consideration by the four Contracting Governments before the 9th August, 1927 (the date of completion of the three-year period referred to in resolution 4 above quoted), of the question of the ultimate capacity of the reservoir. During the period of three years referred to, the dam will not be carried higher than the level necessary for a reservoir of 1,100,000 acre-feet.

Pending finality regarding the ultimate capacity of the reservoir, the following estimate of cost of a reservoir of 1,100,000 acre-feet has been approved :—

Estimated cost of a reservoir of 1,100,000 acre-feet capacity ..	£2,547,000
Estimated cost of special outlet works for power	40,700
Approximate cost of additional works necessary to permit of the capacity of the reservoir being increased at a later date to 2,000,000 acre-feet, if so agreed upon by the four Contracting Governments	350,000
Total	£2,937,700

The dam, which is in course of construction, will consist of two main sections—(1) the outlets and flood spillway, and (2) the earthen embankment containing a concrete core wall sunk into the solid granite, and provided with a tunnel for drainage and inspection purposes. The first section, which will extend from the New South Wales bank of the river to the Victorian bank, and which will be practically all of concrete, is being constructed by the New South Wales Constructing Authority. The remaining section of the dam, which extends from the Victorian bank of the river to the high ground bordering the river flats, is in course of construction by the Victorian Constructing Authority.

The total length of the dam, including both sections above referred to, will be 4,200 feet.

On the New South Wales section of the work the placing of the concrete in the foundations of the main portion of the dam and in the wing wall is proceeding. The concrete stilling pool below the proposed hydro-electric outlets has been completed, and work is in progress in connexion with the excavation of the channel for the diversion of the river during the work of construction in the river bed.

On the Victorian side of the river the construction of the earthen embankment and the concrete core wall has advanced considerably during the year.

The total expenditure incurred to date on the whole of the works at the Hume Reservoir amounts to £1,590,000.

(*c*) *Lake Victoria Storage.* The Lake Victoria Storage is situated in the south-west corner of the State of New South Wales. The scheme approved consists of the construction of extensive embankments and channels, the construction of three regulators (the inlet regulator in the Frenchman's Creek, the controlling regulator in the main inlet channel, and the outlet regulator in the Rufus River), and improvements to Frenchman's Creek and Rufus River.

These works, which are now practically completed, will enable the storage in the Lake of 514,000 acre-feet of water for use by the State of South Australia.

(*d*) *Weirs and Locks.* Two weirs and locks, viz., that at Torrumbarry (Victoria), and No. 1 (South Australia) have been finally completed. Weir and Lock No. 3 (South Australia) has been completed with the exception of minor details. These three works are now in operation.

Of the remaining weirs and locks at present in hand, four, Nos. 2, 5, 9 (South Australia) and 11 (Victoria) are in an advanced stage of construction. At Weir and Lock No. 10 (New South Wales) work has commenced inside the first coffer-dam, and at Weir and Lock No. 4 (South Australia) preliminary work is in progress.

Investigations are proceeding with a view to the location of the sites of the weirs and locks to be constructed in the River Murray above Mildura.

(iv) *Finance.* In the River Murray Agreement of 1914, the estimated total cost of the whole of the works was set down at £4,663,000, and it was provided that the four Contracting Governments contribute towards such estimated expenditure in the following proportions, viz. :—

Commonwealth	£1,000,000
New South Wales	1,221,000
Victoria	1,221,000
South Australia	1,221,000
	£4,663,000

It is now clear, from the experience which has been gained in connexion with the works which have been put in hand to date, that the total cost of the whole of the works will be considerably in excess of the estimate referred to. The total expenditure incurred up to 31st March, 1926, on that portion of the scheme completed and in course of construction amounted to £4,050,000, towards which expenditure the four Contracting Governments, in conformity with the amending Agreement previously referred to, have contributed in equal shares.

The Commission's estimate of expenditure on works, surveys, investigations, etc., during the year 1926–27 is as follows :—

New South Wales—		
Hume Reservoir	£390,000	
Weir and Lock No. 10	110,000	
Surveys and Borings	5,000	
		£505,000
Victoria—		
Hume Reservoir	£170,000	
Weir and Lock No. 11 (Mildura)	70,000	
Surveys, Investigations, and Supplies of Materials for other Weirs and Locks	30,000	
		£270,000
South Australia—		
Weir and Lock No. 2	£73,000	
Weir and Lock No. 4	75,000	
Weir and Lock No. 5	30,000	
Weir and Lock No. 6	40,000	
Weir and Lock No. 9	5,000	
Other	12,000	
		£235,000
Total		£1,010,000

The four Contracting Governments will furnish their respective contributions towards this expenditure as required during the year.

(v) *Gaugings.* The River Murray Agreement places upon the Commission the duty of carrying on an effective and uniform system of making and recording continuous gaugings of the main stream of the River Murray and its tributaries within the boundaries of each of the States of New South Wales, Victoria, and South Australia, and of all diversions, whether natural or artificial or partly natural and partly artificial, from the main stream and its tributaries. It is further provided that, in lieu of making any such gaugings, the Commission may accept any gaugings made and recorded by any of the Contracting State Governments.

Arrangements have been made with the three Contracting State Governments for the adoption of uniform methods in connexion with all gaugings on the River Murray and its tributaries, and for the submission periodically to the Commission, for purposes of the River Murray Agreement, of the results of such gaugings.

The gaugings made at the Renmark Gauging Station during the year 1924–25 indicated that the total flow of the river at that point was 11,205,333 acre-feet for the year. The total flow at the same station for the preceding year was 12,707,870 acre-feet, the average for all years being about 8,500,000 acre-feet.

The approximate quantities of water diverted from the river by the three States by artificial or partly artificial means for the same year were as follows :—

	Acre-feet.
New South Wales	950,865
Victoria	1,037,740
South Australia	94,269
	2,082,874

The River Murray Commission, as at present constituted, is as follows :—

Commonwealth—Hon. W. C. Hill, M.P., Minister for Works and Railways (President).
Deputy Commissioner—Mr. T. Hill, M.V.I.E.
New South Wales—Mr. H. H. Dare, M.E., M. Inst. C.E.
Victoria—Mr. J. S. Dethridge, M. Inst. C.E.
South Australia—Mr. J. H. O. Eaton, M. Inst. E., Aust.
Secretary—Mr. P. A. Gourgaud.
Accountant—Mr. H. J. Rowlands, A.F.I.A.

CHAPTER XXIV.

POPULATION.

§ 1. Enumerations and Estimates.

The nature of the early "musters" of the population and the subsequent Census enumerations which have been conducted in Australia were reviewed in Official Year Book, Number 15, pp. 1083-5. This review was accompanied by a tabular statement showing the dates on which the various enumerations were made, and the numbers counted on such occasions.

§ 2. Census of 4th April, 1921.

1. **Numbers Enumerated.**—The Census for the whole of Australia was taken as for the night between the 3rd and the 4th of April, 1921, and was the second Census under the provisions of the Commonwealth Census and Statistics Act 1905–20, which provides for the enumeration being dealt with from one centre, instead of each State being responsible for its own count as on previous occasions. The numbers recorded in the several States and Territories were as follows :—

POPULATION.—4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	Males.	Females.	Persons.
States—			
New South Wales ..	1,071,501	1,028,870	2,100,371
Victoria	754,724	776,556	1,531,280
Queensland	398,969	357,003	755,972
South Australia ..	248,267	246,893	495,160
Western Australia ..	177,278	155,454	332,732
Tasmania	107,743	106,037	213,780
Territories—			
Northern	2,821	1,046	3,867
Federal Capital	1,567	1,005	2,572
Australia	2,762,870	2,672,864	5,435,734

2. **Increase since Census of 1881.**—(i) *Australia.*—The increase of population between the Census of 3rd April, 1911, and that of 4th April, 1921, was 980,729, of which 449,835 were males and 530,894 were females, as compared with an increase of 681,204, comprising 335,107 males and 346,097 females, for the preceding ten years. The population of each sex enumerated at the Censuses of 3rd April, 1881, 5th April, 1891, 31st March, 1901, 3rd April, 1911, and 4th April, 1921, was as follows :—

POPULATION.—AUSTRALIA, LAST FIVE CENSUSES.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Date of Census.	Males.	Females.	Persons.	(a) Masculinity.
3rd April, 1881	1,214,913	1,035,281	2,250,194	7.98
5th April, 1891	1,704,039	1,470,353	3,174,392	7.36
31st March, 1901	1,977,928	1,795,873	3,773,801	4.83
3rd April, 1911	2,313,035	2,141,970	4,455,005	3.84
4th April, 1921	2,762,870	2,672,864	5,435,734	1.66

(a) Excess of males over females per 100 per population.

(ii) *States and Territories.* The increases in the population of the several States and Territories during the past four intercensal periods have been as follow :—

POPULATION.—STATES, ETC., INTERCENSAL INCREASES.

State or Territory.	1881–1891.		1891–1901.		1901–1911.		1911–1921.	
	Numerical.	Per cent.	Numerical.	Per cent.	Numerical.	Per cent.	Numerical.	Per cent.
N.S. Wales ..	(a)374,129	49.90	(a)230,892	20.54	(a)293,602	21.67	453,637	27.55
Victoria ..	278,274	32.30	61,230	5.37	114,481	9.53	215,729	16.40
Queensland ..	180,193	84.39	104,411	26.52	107,684	21.62	150,159	24.79
South Australia	39,119	14.15	42,813	13.57	50,212	14.01	86,602	21.20
Western Australia	20,074	67.57	134,342	269.86	97,990	53.22	50,618	17.94
Tasmania ..	30,962	26.76	25,808	17.60	18,736	10.86	22,569	11.80
N. Territory ..	1,447	41.93	(b)–87	(b)–1.78	(b)–1,501	(b)–31.20	557	16.83
Fed. Cap. Ter. ..	..	..	..	..	..	..	858	50.06
Australia ..	924,198	41.07	599,409	18.88	681,204	18.05	980,729	22.01

(a) Including Federal Capital Territory. (b) Decrease.

For Australia as a whole, the increase during the period 1911–1921 was greater by 299,525 than that for the period 1901–1911, the rate of increase being 22.01 per cent. for 1911–1921, as against 18.05 for 1901–1911. The former corresponds to an increase of 1.67 per cent. per annum, the latter to an increase of 2.01 per cent. per annum.

As regards the separate States, both the numerical and relative increases in the case of New South Wales, Victoria, Queensland, South Australia, and Tasmania were greater for 1911–1921 than for 1901–1911. On the other hand, Western Australia experienced a smaller increase during the decade 1911–1921 than in either of the two immediately preceding decades. The Northern Territory showed during the period 1911–1921 its first increase in population since the decade 1881–1891.

§ 3. Distribution and Fluctuation of Population.

1. **Present Number.**—The population of Australia on the 31st December, 1925, was estimated at 5,992,084 persons, of whom 3,060,315, or 51.07 per cent., were males and 2,931,769, or 48.93 per cent., were females. The increase during the year 1925 was 118,581, equal to 2.02 per cent., males having increased by 63,467, or 2.12 per cent., and females by 55,114, or 1.92 per cent. Of the increase referred to, 81,224, or 68.50 per cent., was due to the excess of births over deaths, and 37,357, or 31.50 per cent., was due to the excess of immigration over emigration.

2. **Growth and Distribution.**—The following tables show the population of the States at decennial intervals from their foundation to the year 1910, and for each of the

last five years. In issues of the Year Book up to No. 15, the male and female population of Australia as a whole were given at quinquennial periods from 1788, but it is considered that the abridged table presented herewith will suffice for general purposes.

POPULATION.—1788 TO 1925.

Year.	Estimated Population at end of Year.								
	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern	Federal Capital.	
					MALES.				
(a) 1800	3,780	..	..	..	..	..	..	..	3,780
1810	7,585	..	..	..	..	..	..	..	7,585
1820	23,784	..	..	..	..	..	..	..	23,784
1830	33,900	..	..	..	877	(b)18,108	..	..	52,885
1840	85,560	.	..	8,272	1,434	32,040	..	..	127,306
1850	154,976	..	..	35,902	3,576	44,229	..	..	238,683
1860	197,851	(b)330,302	(b)16,817	64,340	9,597	49,653	..	..	668,560
1870	272,121	397,230	69,221	94,894	15,511	53,517	..	..	902,494
1880	404,952	450,558	124,013	147,438	16,985	60,568	..	..	1,204,514
1890	602,704	595,519	223,252	166,049	28,854	76,453	..	..	1,692,831
1900	716,047	601,773	274,684	180,349	110,088	89,763	(c) 4,288	..	1,976,992
1910	858,181	646,482	325,513	206,557	157,971	98,866	2,738	..	2,296,308
1921	1,084,399	764,905	404,907	252,144	178,500	110,026	2,718	(b)1,128	2,798,727
1922	1,107,695	788,626	415,802	257,475	183,386	109,494	2,540	1,443	2,866,461
1923	1,127,195	806,546	428,312	265,340	189,429	109,546	2,527	1,407	2,930,302
1924	1,150,759	824,182	440,115	273,701	195,341	108,569	2,538	1,643	2,996,848
1925	1,171,590	838,693	454,819	282,790	199,596	108,047	2,550	2,230	3,060,315
					FEMALES.				
(a) 1800	1,437	.	.	.	.	...	..	..	1,437
1810	3,981	..	.	.	..	..	..	..	3,981
1820	9,759		.	.	..	..	..	..	9,759
1830	10,688		..	..	295	(b)6,171	..	..	17,154
1840	41,908	.	..	6,358	877	13,959	..	..	63,102
1850	111,924	..	..	27,798	2,310	24,641	..	..	166,673
1860	150,695	(b)207,932	(b)11,239	61,242	5,749	40,168	..	..	477,025
1870	225,871	326,695	46,051	89,652	9,624	47,369	..	..	745,262
1880	336,190	408,047	87,027	128,955	12,576	54,222	..	..	1,027,017
1890	510,571	538,209	168,864	152,898	19,648	68,334	..	..	1,458,524
1900	644,258	594,440	219,163	176,901	69,879	83,137	(c) 569	..	1,788,347
1910	785,674	654,926	273,503	200,311	118,861	94,937	563	..	2,128,775
1921	1,043,517	785,781	363,324	250,267	157,215	108,290	1,016	(b) 936	2,710,346
1922	1,065,237	801,599	372,488	255,719	160,222	109,430	1,011	1,114	2,766,820
1923	1,082,250	818,834	382,856	259,408	164,386	109,528	1,028	1,215	2,819,505
1924	1,103,691	832,913	394,779	264,805	168,783	109,270	1,059	1,355	2,876,655
1925	1,126,852	845,324	406,366	268,843	172,587	108,985	1,106	1,706	2,931,769
					PERSONS.				
1788	859	..	..	..	..	..	..	..	859
1790	2,056	.	.	..	..	..	..	..	2,056
1800	5,217	.	.	..	..	..	..	..	5,217
1810	11,566		.	..	..	..	..	..	11,566
1820	33,543	..	.	..	..	..	..	..	33,543
1830	44.588	..	..	..	1,172	(b)24,279	..	..	70,039
1840	127,468	..	.	14,630	2,311	45,999	..	..	190,408
1850	266,900	..	..	63,700	5,886	68,870	..	..	405,356
1860	348,546	(b)538,234	(b) 28,056	125,582	15,346	89,821	..	..	1,145,585
1870	497,992	723,925	115,272	184,546	25,135	100,886	..	..	1,647,756
1880	741,142	858,605	211,040	276,393	29,561	114,790	..	..	2,231,531
1890	1,113,275	1,133,728	392,116	318,947	48,502	144,787	..	..	3,151,355
1900	1,360,305	1,196,213	493,847	357,250	179,967	172,900	(c) 4,857	..	3,765,339
1910	1,643,855	1,301,408	599,016	406,868	276,832	193,803	3,301	..	4,425,083
1921	2,127,916	1,550,686	768,231	502,411	335,715	218,316	3,734	(b)2,064	5,509,073
1922	2,172,932	1,590,225	788,290	513,194	343,608	218,924	3,551	2,557	5,633,281
1923	2,209,445	1,625,380	811,168	524,748	353,815	219,074	3,555	2,622	5,749,807
1924	2,254,450	1,657,095	834,894	538,506	364,124	217,839	3,597	2,998	5,873,503
1925	2,298,442	1,684,017	861,185	551,633	372,183	217,032	3,656	3,936	5,992,084

(a) Details as to sex not available for earlier decennial dates. (b) Previously included with New South Wales. (c) Previously included with South Australia.

So far as the numbers can be ascertained, the nucleus of the population of Australia consisted of 1,024 persons, including the military, who landed in Sydney Cove on the 26th January, 1788. For many years the number increased very slowly, and in 1825, when Tasmania (then known as Van Diemen's Land) was separated from New South Wales and constituted a separate colony, *i.e.*, 37 years after the first settlement, the total population was only 52,505 persons, of whom 38,313 were in New South Wales, and 14,192 were in Tasmania. The total for Australia attained its first million in 1858, 70 years after settlement. At this time the population was distributed among the States, or Colonies as they were then, as follows :—New South Wales, 31.97 per cent. ; Victoria, 47.22 per cent. ; Western Australia, 1.38 per cent. ; South Australia, 11.29 per cent. ; and Tasmania, 8.14 per cent. The second million was reached in 1877, after a lapse of nineteen years, by an average rate of increase of 3.53 per cent. per annum. The third million was reached twelve years later, in 1889, by an annual rate of increase of 3.48 per cent. ; the fourth million sixteen years later, in 1905, at the rate of increase of 1.74 per cent. per annum ; the fifth million thirteen years later in 1918, by an annual average rate of 1.79 per cent. ; and the sixth million eight years later in 1926 by an annual average rate of 2.31 per cent.

The growth of the population of Australia and of each State thereof, is illustrated by the graph accompanying this chapter.

3. **Mean Population.**—The following table shows the mean population for each State and Territory for the five years 1921 to 1925.

MEAN POPULATION, EXCLUSIVE OF FULL-BLOOD ABORIGINALS.

Year.	States.						Territories.		Australia.
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern.	Fed. Cap.	
1921 ..	2,107,119	1,537,008	762,961	497,231	333,782	213,274	3,906	2,483	5,457,764
1922 ..	2,149,349	1,570,824	781,022	506,036	339,649	214,777	3,653	2,815	5,568,125
1923 ..	2,190,410	1,607,773	802,748	517,445	348,275	215,327	3,610	3,315	5,688,903
1924 ..	2,228,337	1,641,852	825,151	529,691	359,521	214,687	3,603	3,848	5,806,690
1925 ..	2,274,247	1,671,467	851,419	543,986	368,194	213,469	3,681	4,721	5,931,184

4. **Increase at Decennial Periods since 1790.**—The following table furnishes particulars relative to the increase in population of Australia during each decade, and the percentage of such increase on the population at the commencement of the decade :—

POPULATION.—AUSTRALIA, DECENNIAL INCREASE.

Decade ended 31st December—	Increase during Decade—					
	Numerical.			Percentage.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
				%	%	%
1790	(*a*)	(*a*)	2,056	..	..	..
1800	(*a*)	(*a*)	3,161	(*a*)	(*a*)	153.75
1810	3,805	2,544	6,349	100.66	177.04	121.70
1820	16,199	5,778	21,977	213.57	145.14	190.01
1830	29,101	7,395	36,496	122.36	75.78	108.80
1840	74,421	45,948	120,369	140.72	267.86	171.86
1850	111,377	103,571	214,948	87.49	164.13	112.89
1860	429,877	310,352	740,229	180.10	186.20	182.61
1870	233,934	268,237	502,171	34.99	56.23	43.84
1880	302,020	281,755	583,775	33.47	37.81	35.43
1890	488,317	431,507	919,824	40.54	42.02	41.22
1900	284,161	329,823	613,984	16.79	22.61	19.48
1910	319,316	340,428	659,744	16.15	19.04	17.52
1920	455,422	530,792	986,214	19.83	24.93	22.29

(*a*) Not available.

5. **Area, Population, Masculinity, and Density—States, 1925.**—A previous table showed the estimated number of persons on the 31st December, 1925, in each of the States and Territories. In the following table the proportions of the total area, and of the total population represented by each State or Territory, are given, together with the masculinity and the density of population :—

AREA, POPULATION, MASCULINITY, AND DENSITY.—STATES, 1925.

State or Territory.	Percentage on Total Area.	Per cent. Estimated Population 31st December, 1925.			Masculinity.(*a*)	Density. (*b*)
		Males.	Females.	Persons.		
New South Wales ..	10.40	38.29	38.43	38.36	1.95	7.43
Victoria	2.96	27.41	28.83	28.10	—0.39	19.16
Queensland	22.54	14.86	13.86	14.37	5.63	1.28
South Australia	12.78	9.24	9.17	9.21	2.53	1.45
Western Australia ..	32.81	6.52	5.89	6.21	7.26	0.38
Tasmania	0.88	3.53	3.72	3.62	—0.43	8.28
Northern Territory ..	17.60	0.08	0.04	0.06	39.50	0.007
Federal Capital Territory ..	0.03	0.07	0.06	0.07	13.31	4.19
Australia	100.00	100.00	100.00	100.00	2.15	2.01

(*a*) Excess of males over females in each 100 persons. (*b*) Number of persons per square mile.
NOTE.—The minus sign (—) indicates excess of females over males in each 100 persons.

6. **Urban and Rural Distribution.**—The following table shows the number of persons and the percentage on the total population recorded at the Census of the 4th April, 1921, as resident in urban and rural areas respectively. The metropolitan divisions include the capital city and the adjoining urban areas ; the urban provincial districts cover those cities and towns which are not adjacent to the metropolitan areas, and which are incorporated for local government purposes ; those persons classed as migratory were mostly on board ships in Australian ports :—

URBAN AND RURAL POPULATION.—AUSTRALIA, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Particulars.	States.						Territories.		Australia.
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern	Federal Capital.	
	NUMBER.								
Urban—									
Metropolitan	899,059	766,465	209,946	255,375	154,873	52,361	..	..	2,338,079
Provincial	525,007	187,490	183,720	41,637	42,571	55,644	1,399	..	1,037,468
Rural ..	664,590	571,577	359,014	195,054	130,098	105,123	2,403	2,563	2,030,422
Migratory ..	11,715	5,748	3,292	3,094	5,190	652	65	9	29,765
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
	PERCENTAGE ON TOTAL.								
Urban—									
Metropolitan	42.80	50.05	27.77	51.57	46.55	24.49	..	..	43.01
Provincial..	25.00	12.24	24.30	8.41	12.79	26.03	36.18	..	19.09
Rural ..	31.64	37.33	47.49	39.39	39.10	49.17	62.14	99.65	37.35
Migratory ..	0.56	0.38	0.44	0.63	1.56	0.31	1.68	0.35	0.55
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

For Australia as a whole 62.10 per cent. of the population is urban, this percentage being exceeded by New South Wales, 67.80 per cent., and Victoria 62.29 per cent. Tasmania, with 50.52 per cent., has the smallest percentage of urban population in all the States.

During the ten years between the Censuses of 1911 and of 1921 the population of the metropolitan areas in the aggregate increased in proportion to the total population of Australia from 38.03 per cent. in 1911 to 43.01 per cent. in 1921. This movement was common to all the States, though in varying degree. The relative accretion to the metropolitan total was greatest in Western Australia, where it increased from 37.85 per cent. to 46.55 per cent. of the population of the State, and was least in New South Wales, where it increased from 38.23 per cent. to 42.80 per cent. The abnormal increase in the proportion of the metropolitan population to the total population of Western Australia is not due entirely to the actual increase to the population of Perth and suburbs, but is caused in some measure by the departure from the State of many persons who had been engaged in connexion with the mining industry in extra-metropolitan districts.

In Victoria and in South Australia more than half the population lives within the metropolitan areas. At the Census of 1921, 50.05 per cent. of the population of Victoria, and 51.57 per cent. of the population of South Australia, were resident in their respective capitals. Of the total population of Australia, 43.01 per cent. was in the metropolitan areas, the proportion of the total males being 40.35 per cent., and of the females 45.77 per cent. The post-censal estimates, which are given in the following table, show a higher proportion in each of the capitals than was shown by the Census.

7. Metropolitan Population—Australia and Other Countries.—The abnormal concentration of population in the capitals of the States of Australia, as compared with other countries, may be readily seen from the following table. It may be mentioned, however, that, in most of the European countries, the capital is not always the most populous of many big cities, whereas, in Australia, the capital is invariably the most populous city, and in some States is the only town of important magnitude.

METROPOLITAN POPULATION.—AUSTRALIA AND OTHER COUNTRIES.

State or Country.	Metropolis.	Year.	Population.	Percentage on total of State or Country.
				%
New South Wales ..	Sydney	31st Dec., 1925	1,039,390	45.22
Victoria	Melbourne		912,130	54.16
Queensland ..	Brisbane		263,711	30.62
South Australia ..	Adelaide		303,614	55.04
Western Australia ..	Perth		179,388	48.20
Tasmania	Hobart		58,740	27.07
Australia	(6 Cities)		2,756,973	46.07
New Zealand ..	Wellington ..	1.4.1926	121,324	8.96
Northern Ireland ..	Belfast	1924	434,000	33.93
Austria	Vienna	1923	1,866,147	28.56
Denmark	Copenhagen ..	1925	729,214	21.32
Hungary	Budapest	1921	1,184,616	14.91
Irish Free State ..	Dublin	1925	438,000	13.85
Saxony	Dresden	1925	608,025	12.23
England ..	London (*a*) ..	1925	4,602,000	11.83
Belgium	Brussels	1924	794,311	10.26
Norway	Oslo	1920	258,483	9.75
Netherlands ..	Amsterdam ..	1924	712,222	9.74
Bavaria	Munich	1925	680,704	9.25
Scotland ..	Edinburgh	1925	427,300	8.73
France	Paris	1921	2,906,472	7.41
Portugal	Lisbon	1921	435,359	7.31
Sweden	Stockholm	1924	438,896	7.27
Germany	Berlin	1925	3,931,071	6.29
Greece	Athens	1923	385,026	6.21
Finland	Helsingfors ..	1924	207,954	5.95
Czecho-Slovakia ..	Prague	1921	676,657	4.98
Spain	Madrid	1925	791,511	3.58
Poland	Warsaw	1921	936,046	3.44
Japan	Tokio	1925	1,995,303	3.34
Switzerland ..	Berne	1924	105,070	2.68
Italy	Rome	1925	746,783	1.77
Russia (European) ..	Leningrad	1923	1,067,328	0.80

(*a*) Population of Greater London in 1925 was 7,719,622.

8. **Principal Urban Centres.**—The following table gives particulars of the population of the principal urban incorporated areas in each State at the 31st December, 1925 :—

POPULATION OF PRINCIPAL URBAN INCORPORATED AREAS.—AUSTRALIA, 31st DECEMBER, 1925.

Town.	Population.
New South Wales—	
Sydney and Suburbs	1,039,390
Newcastle and Suburbs	98,050
Broken Hill	23,760
Auburn	16,790
Granville	16,110
Parramatta	16,030
Bankstown	15,850
Lithgow	13,310
Lidcombe	12,920
Maitland (East and West)	12,720
Goulburn	12,350
Katoomba	10,060
Bathurst	9,300
Lismore	9,140
Albury	8,510
Wagga Wagga	8,350
Wollongong	7,920
Orange	7,700
Tamworth	7,150
Liverpool	6,620
Grafton (including South Grafton)	6,220
Armidale	5,540
Dubbo	5,090
Victoria—	
Melbourne and Suburbs	912,130
Ballarat and Suburbs	40,990
Geelong and Suburbs	39,100
Bendigo and Suburbs	33,700
Warrnambool	8,020
Mordialloc	7,220
Castlemaine and Suburbs	7,170
Carrum	6,500
Wonthaggi	6,500
Mildura	5,850
Hamilton	5,200
Ararat	5,000
Maryborough	4,840
Stawell	4,660
Colac	4,350
Horsham	4,160
Wangaratta	3,850
Queensland—	
Brisbane and Suburbs	263,711
Townsville	26,456
Rockhampton	25,000
Toowoomba	23,394
Ipswich	20,526
Queensland—*continued.*	
Maryborough	10,635
Bundaberg	9,500
Charters Towers	9,350
Gympie	8,769
Cairns	8,500
Sandgate	8,200
Mackay	7,100
Warwick	6,800
Mount Morgan	6,750
Southport	5,000
Roma	4,000
South Australia—	
Adelaide and Suburbs	303,614
Port Pirie	9,756
Mount Gambier	4,008
Wallaroo	3,256
Victor Harbour	2,862
Kadina	2,488
Peterborough	2,425
Burra	1,824
Gawler	1,778
Kapunda	1,568
Jamestown	1,381
Port Augusta	1,355
Moonta	1,329
Western Australia—	
Perth and Suburbs	179,388
Boulder	6,163
Kalgoorlie	5,000
Bunbury	4,850
Northam	4,600
Geraldton	4,199
Albany	3,980
Collie	3,550
Narrogin	2,459
York	1,580
Tasmania—	
Hobart and Suburbs	58,740
Launceston and Suburbs	27,600
Devonport	4,960
Burnie	3,630
Ulverstone	2,740
Queenstown	2,510
New Norfolk	2,150
Latrobe	1,740
Zeehan	1,610
Deloraine	1,520

§ 4. Elements of Increase.

1. **Natural Increase.**—(*i*) *General.* The two factors which contribute to the growth of a population are the "natural increase" by excess of births over deaths, and the "net immigration," *i.e.*, the excess of arrivals over departures. While the relative potency of these factors depends upon a variety of causes, it may be said that, in general, in the case of a new country "net immigration" provides an important part of the increase of population, while in an old country "natural increase," modified more or less by "net emigration," or excess of departures over arrivals, is the principal element of increase. A graph showing the natural increase to the population of each State and of Australia, from year to year since 1860, accompanies this chapter.

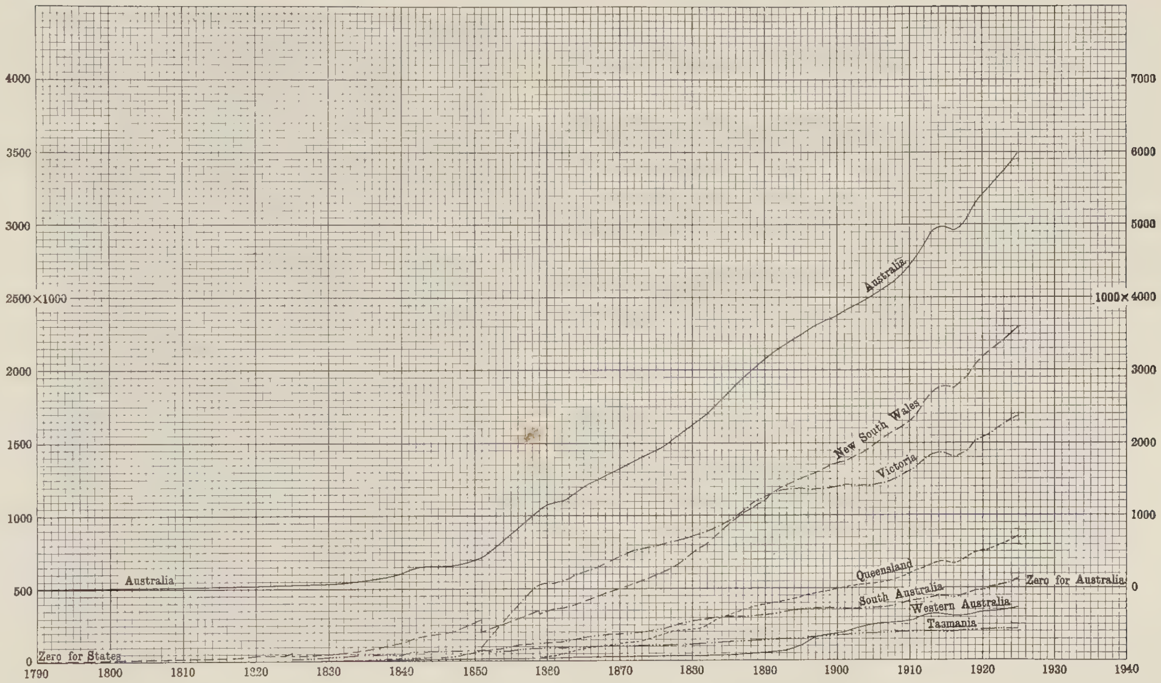
POPULATION.—NATURAL INCREASE (*a*), 1861 TO 1925.

Period.	States.						Territories.		Australia.
	N.S.W. (*b*)	Victoria.	Q'land.	S. Aust. (*c*)	W. Aust.	Tas.	Northern. (*d*)	Fed. Cap. (*e*)	
				MALES.					
1861 to 1870	47,905	69,283	8,183	20,526	1,519	7,174	..	..	154,590
1871 to 1880	64,107	67,117	14,664	23,655	1,733	6,549	..	..	177,825
1881 to 1890	97,411	73,142	25,858	33,488	2,757	11,377	..	..	244,033
1891 to 1900	105,526	79,251	38,249	28,320	4,838	13,262	..	..	269,446
1901 to 1910	115,306	73,280	38,043	26,649	19,045	16,658	—487	..	288,494
1911 to 1920	149,100	87,548	54,391	35,086	22,517	18,059	—326	153	366,528
1921 ..	16,515	9,626	6,241	3,467	1,779	1,778	— 31	12	39,387
1922 ..	17,204	10,551	5,891	3,613	2,169	1,911	— 14	12	41,337
1923 ..	15,744	9,430	5,464	3,249	2,107	1,748	5	— 4	37,743
1924 ..	15,463	9,637	5,610	3,297	2,176	1,523	— 13	4	37,697
1925 ..	15,934	10,010	5,735	3,095	2,053	1,583	— 15	13	38,408
1861 to 1925	660,215	498,875	208,329	184,445	62,693	81,622	—881	190	1,695,488
				FEMALES.					
1861 to 1870	56,670	80,534	11,137	21,210	2,406	9,059	..	..	181,016
1871 to 1880	75,843	79,023	21,997	25,552	2,840	8,891	..	..	214,146
1881 to 1890	112,294	87,964	39,500	35,353	4,347	13,592	..	..	293,050
1891 to 1900	121,037	93,664	49,794	30,235	10,430	14,499	..	..	319,659
1901 to 1910	130,460	82,460	48,958	27,455	24,822	16,549	61	..	330,765
1911 to 1920	168,873	93,144	65,736	36,143	29,447	18,425	197	150	412,115
1921 ..	18,095	9,800	6,946	3,525	2,548	1,780	30	11	42,735
1922 ..	18,800	10,582	6,944	3,780	2,795	1,909	24	14	44,848
1923 ..	17,277	9,228	6,625	3,482	2,817	1,772	29	13	41,243
1924 ..	17,407	10,000	6,771	3,425	2,862	1,737	26	22	42,250
1925 ..	17,859	10,075	7,003	3,383	2,817	1,639	18	22	42,816
1861 to 1925	754,615	566,474	271,411	193,543	88,131	89,852	385	232	1,964,643
				PERSONS.					
1861 to 1870	104,575	149,817	19,320	41,736	3,925	16,233	..	..	335,606
1871 to 1880	139,950	146,140	36,661	49,207	4,573	15,440	..	..	391,971
1881 to 1890	209,705	161,106	65,358	68,841	7,104	24,969	..	..	537,083
1891 to 1900	226,563	172,915	88,043	58,555	15,268	27,761	..	..	589,105
1901 to 1910	245,766	155,740	87,001	54,104	43,867	33,207	—426	..	619,259
1911 to 1920	317,973	180,692	120,127	71,229	51,964	36,484	—129	303	778,643
1921 ..	34,610	19,426	13,187	6,992	4,327	3,558	— 1	23	82,122
1922 ..	36,004	21,133	12,835	7,393	4,964	3,820	10	26	86,185
1923 ..	33,021	18,658	12,089	6,731	4,924	3,520	34	9	78,986
1924 ..	32,870	19,637	12,381	6,722	5,038	3,260	13	26	79,947
1925 ..	33,793	20,085	12,738	6,478	4,870	3,222	3	35	81,224
1861 to 1925	1,414,830	1,065,349	479,740	377,988	150,824	171,474	—496	422	3,660,131

(*a*) Excess of births over deaths. (*b*) Including Federal Capital Territory prior to 1911.
(*c*) Including Northern Territory prior to 1901. (*d*) Included in South Australia prior to 1901.
(*e*) Part of New South Wales prior to 1911.

NOTE.—Minus sign (—) denotes excess of deaths over births.

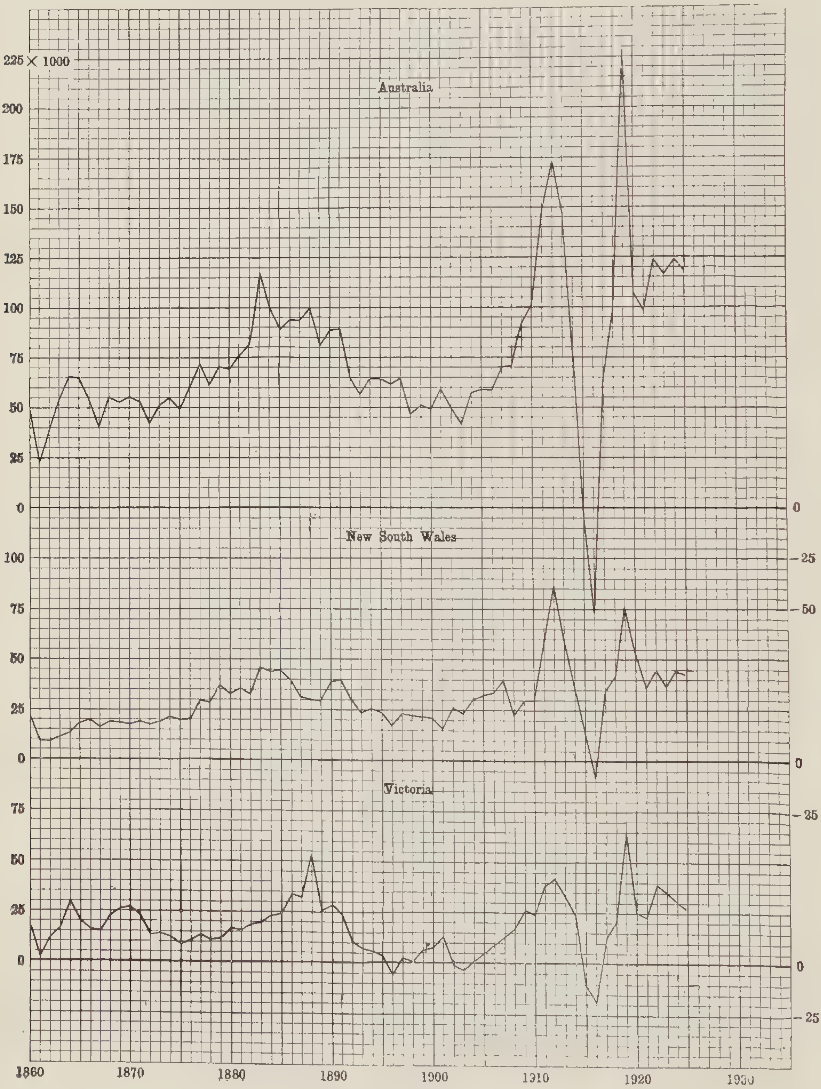
TOTAL POPULATION, 1788 TO 1925.



EXPLANATION.- The base of each small square represents one year's interval for the States and Australia, and the vertical height for the States 50,000 persons, and for Australia 100,000 persons.

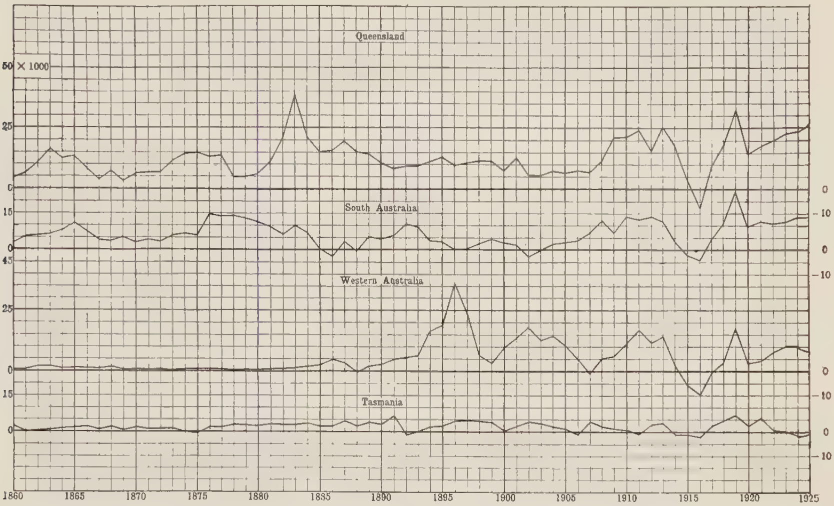
Where the population falls suddenly, the fall denotes the creation of a new colony, *e.g.*, New South Wales in 1825 lost the whole population of Tasmania.

TOTAL INCREASE OF POPULATION—AUSTRALIA, AND NEW SOUTH WALES AND VICTORIA, 1860 TO 1925.



(For explanation see next page.)

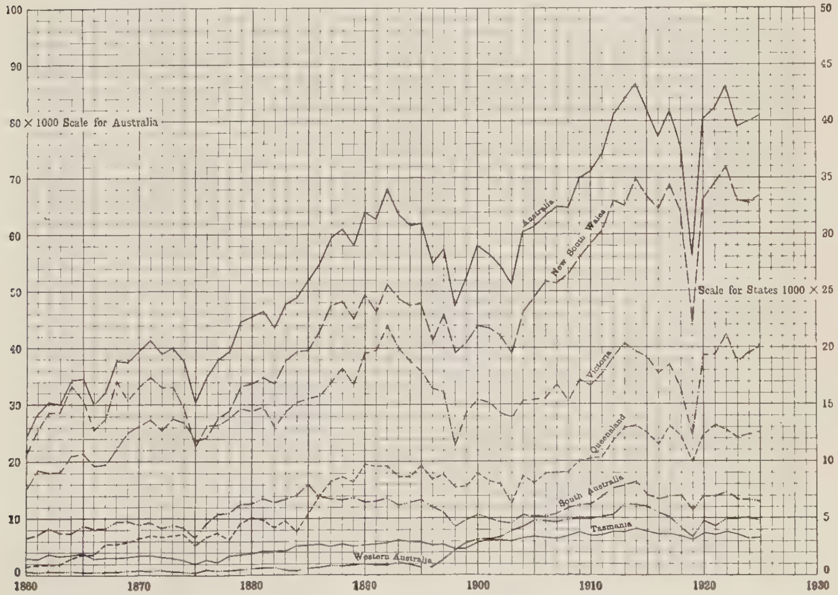
TOTAL INCREASE OF POPULATION.—QUEENSLAND, SOUTH AUSTRALIA, WESTERN AUSTRALIA, AND TASMANIA, 1860 TO 1925.



EXPLANATION.—The base of each small square represents an interval of a year for both States and Australia; the vertical height represents 5,000 persons. In the first graph (on page 860) three zero lines taken (i) for Australia, (ii) for New South Wales, and (iii) for Victoria. In the second graph four zero lines are taken (i) for Queensland, (ii) for South Australia, (iii) for Western Australia, and (iv) for Tasmania.

DECREASES in population are shown by carrying the curve in such cases below the zero line, the distance below the zero line indicating the extent of the decrease. The scales in these instances are on the right hand side of the graph.

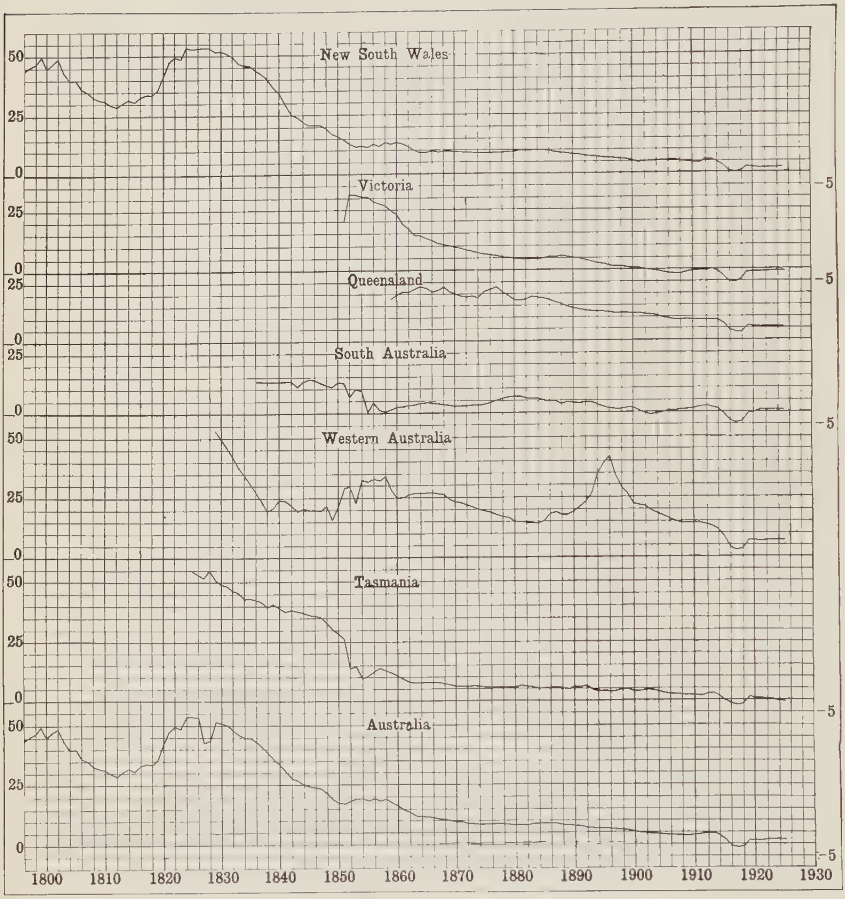
NATURAL INCREASE OF POPULATION 1860 TO 1925.



EXPLANATION.—The base of each small square represents one year for both States and Australia, and the vertical height 1,000 persons for the States and 2,000 persons for Australia.

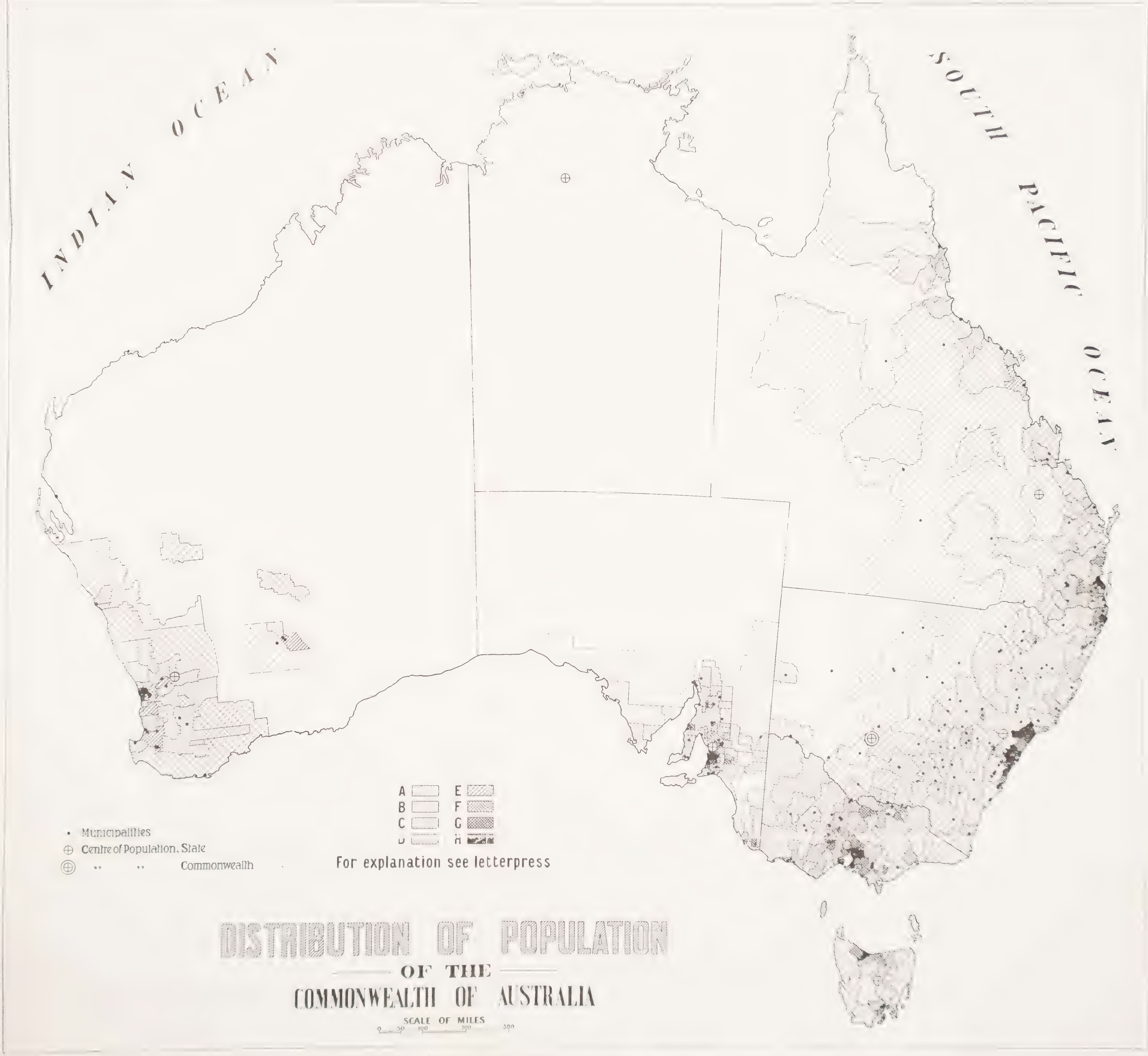
The distances upward from the zero line, marked 0 for both Australia and States, denote the excess of births over deaths. The scale on the left relates to Australia, and that on the right to the States.

MASCULINITY OF POPULATION—1796 TO 1925.



EXPLANATIONS.—The base of each small square represents an interval of two years, and the vertical height an excess of five males per 100 of the population. The basic lines (shown thickened) for Australia and all the States are at zero, equivalent to a numerical equality of the sexes.

It will be noticed that in the case of Australia in the years 1916, 1917, and 1918, Victoria in the years 1903 to 1924, South Australia in the years 1902 to 1904 and 1915 to 1920, and Tasmania for the years 1915 to 1918, the curves are below the zero line, thus showing an excess of females over males.



INDIAN OCEAN
SOUTH PACIFIC OCEAN
A
B
C
D
E
F
G
H
• Municipalities
⊕ Centre of Population, State
⊕ „ „ Commonwealth
For explanation see letterpress
SCALE OF MILES
0 50 100 200 300

DISTRIBUTION OF POPULATION
OF THE
COMMONWEALTH OF AUSTRALIA

The above map furnishes a graphic representation of the distribution of the population of Australia at the date of the Census of 1921. For this purpose the density of the population has been computed for the Local Government areas in each State, and the areas represented have been shaded in accordance with the following scale of density:—

[NOTE.—In the portions left blank the population is less than 1 per 8 sq. miles.]

A — From 1 inhabitant in 8 sq. miles to less than 1 in 4 sq. miles
B — „ 1 „ „ „ 1 in 1 sq. mile
C — „ 1 „ 1 sq. mile „ 2 in 1
D — „ 2 inhabitants in 1 „ „ 4 in 1
E — „ 4 „ 1 „ „ 8 in 1
F — „ 8 „ 1 „ „ 16 in 1
G — „ 16 „ 1 „ „ 32 in 1
H — 32 inhabitants and upwards in 1 sq. mile

The cross within the concentric circles, the centre of which is practically on the longitude of Melbourne and the latitude of Sydney, represents the "centre of gravity" of the population of Australia, and the cross within the single circle in each State represents the "centre of gravity" of the population of such State.

In the natural increase, females have exceeded the males during the period under review. This is due to the higher death rate among males, the effect of which is augmented by the larger number of males subject to the greater risk of death. Although males predominate in both births and deaths, they exceed the females to a greater degree in the deaths than in the births.

(ii) *Comparison with other Countries.*—Notwithstanding its comparatively low birth-rate, Australia has a high rate of natural increase, owing to the fact that its death-rate is very low. The following table gives a comparison between the average rates per annum of natural increase for some of the principal countries of the world for which such information is available, and those for the several States of Australia and the Dominion of New Zealand :—

NATURAL INCREASE PER ANNUM PER 1,000 OF MEAN POPULATION.

(VARIOUS COUNTRIES.)

Country.	Natural Increase per 1,000.	Country.	Natural Increase per 1,000.
Australasia (1921–25)—		Europe—*continued.*	
Tasmania	16.2	England and Wales ..	(*d*) 7.8
Queensland	15.7	Switzerland	(*a*) 6.7
New South Wales ..	15.6	Belgium	(*b*) 6.5
Australia	14.4	Irish Free State ..	(*d*) 5.5
Western Australia ..	13.8	Austria	(*a*) 4.0
New Zealand	13.6	France	(*d*) 2.1
South Australia ..	13.2		
Victoria	12.3	Asia—	
		Japan	(*c*) 11.9
Europe—		Ceylon	(*c*) 9.7
Soviet Republics (1925) ..	17.7		
Netherlands	(*b*) 15.2	Africa—	
Norway	(*b*) 11.5	Union of South Africa (whites only) ..	(*d*) 17.4
Denmark	(*b*) 11.1		
Italy	(*a*) 10.3		
Prussia	(*c*) 9.2	America—	
Scotland	(*d*) 9.1	Province of Quebec ..	(*a*) 20.6
Germany	(*b*) 8.7	Uruguay	(*a*) 14.4
Northern Ireland ..	(*c*) 8.0	Canada	(*d*) 14.0
Spain	(*a*) 8.0	Province of Ontario ..	(*c*) 12.2
Sweden	(*c*) 7.9	United States.. ..	(*a*) 11.1
Finland	(*a*) 7.9	Chile	(*a*) 7.1

(*a*) 1919–23. (*b*) 1919–24. (*c*) 1920–24. (*d*) 1921–25.
Note.—The minus sign (−) indicates a decrease.

Graphs of natural increase for each of the States, as well as for Australia, accompany this chapter.

2. **Net Immigration.***—The other factor of increase in the population, viz., the excess of arrivals over departures, known as " net immigration " is, from its nature, much more subject to variations than is the factor of " natural increase." These variations are due to numerous causes, some of which are referred to later in this chapter, in dealing with the influences which affect the growth of population.

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* The subject of immigration is dealt with at some length later in this chapter.

POPULATION.—INCREASE BY NET IMMIGRATION, 1861 TO 1925.

Period.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust. (a)	W. Aust.	Tas.	Northern. (b)	Fed. Cap. (c)	
				MALES.					
1861 to 1870	26,365	– 2,355	44,221	10,028	4,395	– 3,310	..	..	79,344
1871 to 1880	68,724	– 13,789	40,128	28,889	– 259	502	..	..	124,195
1881 to 1890	100,341	71,819	73,381	– 14,877	9,112	4,508	..	..	244,284
1891 to 1900	7,817	– 72,997	13,183	– 9,732	76,396	48	..	..	14,715
1901 to 1910	26,828	– 28,571	12,786	– 441	28,838	– 7,555	– 1,063	..	30,822
1911 to 1920	61,633	19,773	16,651	3,657	– 3,593	– 9,666	499	– 60	88,894
1921 ..	– 61	1,476	2,111	3,377	– 174	989	– 162	54	7,610
1922 ..	6,092	13,170	5,004	1,718	2,717	– 2,443	– 164	303	26,397
1923 ..	3,756	8,490	7,046	4,616	3,936	– 1,696	– 18	– 32	26,098
1924 ..	8,101	7,999	6,193	5,064	3,736	– 2,500	24	232	28,849
1925 ..	4,897	4,501	8,969	5,994	2,202	– 2,105	27	574	25,059
1861 to 1925	314,493	9,516	229,673	38,293	127,306	– 23,228	– 857	1,071	696,267
				FEMALES.					
1861 to 1870	18,506	38,229	23,675	7,200	1,469	– 1,858	..	..	87,221
1871 to 1880	34,476	2,329	18,979	13,751	112	– 2,038	..	..	67,609
1881 to 1890	62,087	42,198	42,337	– 11,410	2,725	520	..	..	138,457
1891 to 1900	12,650	– 37,433	505	– 5,663	39,801	304	..	..	10,164
1900 to 1910	10,956	– 21,974	5,382	– 4,045	24,160	– 4,749	– 67	..	9,663
1911 to 1920	69,906	26,036	14,830	9,252	6,120	– 7,869	318	84	118,677
1921 ..	1,645	1,875	2,309	1,036	239	1,017	– 92	15	8,044
1922 ..	2,920	5,236	2,220	1,672	212	– 769	– 29	164	11,626
1923 ..	– 264	8,007	3,743	207	1,347	– 1,674	– 12	88	11,442
1924 ..	4,034	4,079	5,152	1,972	1,535	– 1,995	5	118	14,900
1925 ..	5,302	2,336	4,584	655	987	– 1,924	29	329	12,298
1861 to 1925	222,218	70,918	123,716	14,627	78,707	– 21,035	152	798	490,101
				PERSONS.					
1861 to 1870	44,871	35,874	67,896	17,228	5,864	– 5,168	..	..	166,565
1871 to 1880	103,200	– 11,460	59,107	42,640	– 147	– 1,536	..	..	191,804
1881 to 1890	162,428	114,017	115,718	– 26,287	11,837	5,028	..	..	382,741
1891 to 1900	20,467	– 110,430	13,688	– 15,395	116,197	352	..	..	24,879
1901 to 1910	37,784	– 50,545	18,168	– 4,486	52,998	– 12,304	– 1,130	..	40,485
1911 to 1920	131,539	45,809	31,481	12,909	2,527	– 17,535	817	24	207,571
1921 ..	1,584	3,351	4,420	4,413	65	2,006	– 254	69	15,654
1922 ..	9,012	18,406	7,224	3,390	2,929	– 3,212	– 193	467	38,023
1923 ..	3,492	16,497	10,789	4,823	5,283	– 3,370	– 30	56	37,540
1924 ..	12,135	12,078	11,345	7,036	5,271	– 4,495	29	350	43,749
1925 ..	10,199	6,837	13,553	6,649	3,189	– 4,029	56	903	37,357
1861 to 1925	536,711	80,434	353,389	52,920	206,013	– 44,263	– 705	1,869	1,186,368

(a) Including Northern Territory up to 1900. (b) Included in South Australia up to 1900. (c) Part of New South Wales prior to 1911.

NOTE.—Minus sign (–) indicates the excess of departures over arrivals.

From 1860 to 1925 the increment to the population arising from the excess of births over deaths amounted to 3,660,131, or 75.42 per cent. of the total increase, while the increase from net immigration amounted to 1,186,368 or 24.48 per cent. During the 25 years of the present century the total increase to the population was made up of 1,806,366 or 81.12 per cent. natural increase, and 420,379 or 18.88 per cent. by net immigration. The greatest increase to the population by net immigration which has occurred in any one decade was during the ten years 1881 to 1890. This period, however, concluded in world wide speculation, which, in Australia, took the form of speculation in land values, and the effect of the financial collapse which followed this boom is shown by the small increment by migration from 1891 to 1910. For many of the years during this last-mentioned period there was an actual loss to Australian population by net migration.

In 1907 the stream of migration again turned in favour of Australia, and during the five years 1909–1913 the net immigration represented 281,193. The war interrupted the flow, but in 1925 the net immigration represented 37,357 persons.

3. **Total Increase.**—The total increase of the population is obtained by the combination of the natural increase with the net immigration.

The following table gives the total increase in each decade from 1861 to 1920 and for the five years 1921 to 1925 :—

POPULATION.—TOTAL INCREASE, 1861 TO 1925.

Period.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust. (a)	W. Aust.	Tas.	Northern. (b)	Fed. Cap. (c)	
					MALES.				
1861 to 1870	74,270	66,928	52,404	30,554	5,914	3,864	..	..	233,934
1871 to 1880	132,831	53,328	54,792	52,544	1,474	7,051	..	..	302,020
1881 to 1890	197,752	144,961	99,239	18,611	11,869	15,885	..	..	488,317
1891 to 1900	113,343	6,254	51,432	18,588	81,234	13,310	..	..	284,161
1901 to 1910	142,134	44,709	50,829	26,208	47,883	9,103	-1,550	..	319,316
1911 to 1920	210,733	107,321	71,042	38,743	18,924	8,393	173	93	455,422
1921 ..	16,454	11,102	8,352	6,844	1,605	2,767	— 193	66	46,997
1922 ..	23,296	23,721	10,895	5,331	4,886	— 532	— 178	315	67,734
1923 ..	19,500	17,920	12,510	7,865	6,043	52	— 13	— 36	63,841
1924 ..	23,564	17,636	11,803	8,361	5,912	— 977	11	236	66,546
1925 ..	20,831	14,511	14,704	9,089	4,255	— 522	12	587	63,467
1861 to 1925	974,708	508,391	438,002	222,738	189,999	58,394	-1,738	1,261	2,391,755
					FEMALES.				
1861 to 1870	75,176	118,763	34,812	28,410	3,875	7,201	..	..	268,237
1871 to 1880	110,319	81,352	40,976	39,303	2,952	6,853	..	..	281,755
1881 to 1890	174,381	130,162	81,837	23,943	7,072	14,112	..	..	431,507
1891 to 1900	133,687	56,231	50,299	24,572	50,231	14,803	..	..	329,823
1900 to 1910	141,416	60,486	54,340	23,410	48,982	11,800	— 6	..	340,428
1911 to 1920	238,779	119,180	80,566	45,395	35,567	10,556	515	234	530,792
1921 ..	19,740	11,675	9,255	4,561	2,787	2,797	— 62	26	50,779
1922 ..	21,720	15,818	9,164	5,452	3,007	1,140	— 5	178	56,474
1923 ..	17,013	17,235	10,368	3,689	4,164	98	17	101	52,685
1924 ..	21,441	14,079	11,923	5,397	4,397	— 258	31	140	57,150
1925 ..	23,161	12,411	11,587	4,038	3,804	— 285	47	351	55,114
1861 to 1925	976,833	637,392	395,127	208,170	166,838	68,817	537	1,030	2,454,744
					PERSONS.				
1861 to 1870	149,446	185,691	87,216	58,964	9,789	11,065	..	..	502,171
1871 to 1880	243,150	134,680	95,768	91,847	4,426	13,904	..	..	583,775
1881 to 1890	372,133	275,123	181,076	42,554	18,941	29,997	..	..	919,824
1891 to 1900	247,030	62,485	101,731	43,160	131,465	28,113	..	..	613,984
1901 to 1910	283,550	105,195	105.169	49,618	96,865	20,903	-1,556	..	659,744
1911 to 1920	449,512	226,501	151,608	84,138	54,491	18,949	688	327	986,214
1921 ..	36,194	22,777	17,607	11,405	4,392	5,564	— 255	92	97,776
1922 ..	45,016	39,539	20,059	10,783	7,893	608	— 183	493	124,208
1923 ..	36,513	35,155	22,878	11,554	10,207	150	4	65	116,526
1924 ..	45,005	31,715	23,726	13,758	10,309	— 1,235	42	376	123,696
1925 ..	43,992	26,922	26,291	13,127	8,059	— 807	59	938	118,581
1861 to 1925	1,951,541	1,145,783	833,129	430,908	356,837	127,211	-1,201	2,291	4,846,499

(*a*) Including Northern Territory up to 1900. (*b*) Included in South Australia up to 1900.

(*c*) Part of New South Wales prior to 1911.

NOTE.—Minus sign (—) denotes decrease.

For Australia as a whole the greatest numerical increase during any decennial period occurred in the decade 1911 to 1920. The increase during this decade amounted to 986,214, or 22.29 per cent. The greatest proportional increase, on the other hand, occurred during the decade 1881–1890 when it amounted to 919,824, which, on the smaller population of that time represented an increase of 41.22 per cent. for the decade. Of this increase of 919,824, 537,083 or 58.38 per cent. was from the excess of births over deaths, whereas during the decade 1911–1920, of the total increase of 986,214 the natural increase produced 778,643 or 78.96 per cent. A graph showing the increase in the population of each State and of Australia from year to year since 1860 accompanies this chapter.

As regards the individual States the maximum increases in any decennium are as follows :—New South Wales, 449,512, in 1911–20; Victoria, 275,123, in 1881–90; Queensland, 181,076, in 1881–90; South Australia, 91,847, in 1871–80; Western Australia, 131,465, in 1891–1900; Tasmania, 29,997, in 1881–1890.

4. **Rates of Increase.**—(i) *For various Countries.* The table hereunder gives rates of increase in population for Australia, and its component States, and for other countries:—

POPULATION.—RATES OF INCREASE (VARIOUS COUNTRIES), 1887 TO 1925.

Countries.	Annual Rate of Increase in Population during period—							
	1887 to 1891.	1892 to 1896.	1897 to 1901.	1902 to 1906.	1907 to 1911.	1912 to 1916.	1917 to 1921.	1925.
	%	%	%	%	%	%	%	%
AUSTRALASIA—								
Australia ..	3.06	1.86	1.49	1.38	2.03	1.95	1.99	2.02
New South Wales (*a*)	3.23	1.99	1.57	1.99	2.03	2.61	2.17	1.96
Victoria	3.12	0.37	0.52	0.18	2.17	1.38	1.68	1.62
Queensland ..	3.80	2.49	2.25	1.35	2.76	2.20	2.21	3.15
South Australia (*b*)	1.15	1.63	0.77	0.27	2.46	1.52	2.34	2.43
Western Australia	5.54	20.81	7.25	6.22	2.43	1.76	1.27	2.21
Tasmania ..	2.87	1.06	1.83	1.33	0.65	0.58	1.84	−0.37
New Zealand ..	1.47	2.41	1.98	2.86	2.56	1.61	2.32	2.28
EUROPE—								
England and Wales	1.11	1.15	1.15	1.04	1.04	−0.95	1.89	0.37
Scotland ..	0.75	1.06	1.06	0.55	0.56	0.31	0.24	0.20
Ireland	−0.94	−0.60	−0.43	−0.22	−0.06	−0.21	0.58	..
Austria	0.83	0.79	1.05	0.87	0.86	(*c*) 0.80	(*g*)	..
Belgium ..	0.75	1.15	0.92	1.26	0.69	0.54	−0.56	1.66
Denmark ..	0.87	0.99	1.32	1.12	1.26	1.20	2.13	1.90
Finland ..	1.51	1.20	1.41	1.36	1.43	1.18	0.25	*j* 0.74
France	0.06	0.09	0.24	0.15	0.16	−0.72	0.55	*i* 0.13
Germany ..	1.09	1.17	1.51	1.46	1.36	0.71	−1.62	*j* 0.63
Hungary ..	1.01	0.92	1.03	0.77	0.84	(*c*) 0.84	(*g*)	*j* 0.72
Italy	0.71	0.68	0.61	0.52	0.80	1.16	0.22	*j* 1.12
Netherlands ..	1.03	1.28	1.30	1.53	1.22	1.72	1.16	*j* 1.42
Norway ..	0.54	0.96	1.31	0.52	0.66	1.00	1.14	*j* 0.86
Prussia	1.15	1.29	1.59	1.57	1.48	0.85	−1.67	0.43
Rumania ..	1.34	1.15	1.41	1.46	1.48	(*e*) 2.77	(*g*)	..
Serbia	2.08	1.37	1.57	1.52	1.55	(*c*) 1.72	(*g*)	..
Spain	0.48	0.45	0.45	0.52	0.87	0.66	(*f*) 0.34	0.73
Sweden ..	0.40	0.61	0.86	0.61	0.84	0.70	0.64	*j* 0.51
Switzerland ..	0.40	1.22	1.10	1.28	1.17	0.81	0.01	*j* 0.40
ASIA—								
Ceylon	1.35	1.41	2.03	1.62	1.20	1.71	1.28	*j* 3.37
Japan	1.12	0.96	1.25	1.29	1.08	1.42	0.37	1.01
AMERICA—								
Canada	1.08	0.97	1.19	2.99	2.99	(*d*) 3.87	(*h*) 2.00	1.49
Chile	0.72	2.66	0.90	1.53	1.56	1.66	0.07	1.08
Jamaica ..	1.37	1.66	1.72	1.63	0.28	1.36	(*f*) 0.62	*j* 1.10
United States ..	2.15	1.93	2.02	2.00	1.82	1.67	1.21	*j* 1.28

(*a*) Including Federal Capital Territory. (*b*) Including Northern Territory. (*c*) 1911 to 1912. (*d*) 1911 to 1914. (*e*) 1911 to 1915. (*f*) 1916 to 1920. (*g*) Not available owing to changes of boundaries. (*h*) 1911–21. (*i*) 1922. (*j*) 1924.

NOTE.—The minus sign (—) denotes decrease.

(ii) *Variations in the Rates.*—The fluctuations in the rates of increase in the population of Australia are, for the greater part, due to variations in the volume of immigration. The more important of these periodic variations, so far as they affected the population of Australia as a whole, have been referred to in the preceding sub-sections dealing with net immigration. The large increase in the population of Western Australia during the quinquennium 1892–6 marks the opening up of the gold mines of that State.

§ 5. Seasonal Variations of Population.

1. **Variations in Natural Increase.**.—The following table shows the natural increase to the population, during each quarter of the year, based on the experience of the ten years 1916–1925. For Australia as a whole, the rate of natural increase was greatest in the quarter ended 31st March, and least in the quarter ending 30th June, the difference between the rates of increase for these two periods being equal to 18 persons for every 100,000 of the population. In New South Wales, Victoria, South Australia and Western Australia the March quarter was the most favourable, in Queensland the June quarter, and in Tasmania the September quarter. The natural increase was lowest in New South Wales, Victoria and Tasmania in the June quarter, in Queensland and Western Australia in the December quarter, and in South Australia in the September quarter. The differences between the least favourable and the most favourable quarters ranged from 19 per 100,000 of the population in Victoria to 39 per 100,000 in Western Australia.

During recent years there have been two unusual occurrences which have considerably disturbed the normal contributions of the several quarters. The first of these was the payment of the Maternity Allowance which commenced on the 10th October, 1912, with the result that births were registered in the December quarter of that year, which otherwise would not have been registered until the March quarter of the following year. As the results given in this connexion are the averages for decennial periods, this factor is present in the results given for the December quarter up to and including the decade 1912–21, but, with the increasing population it became less important from year to year. Although this factor did not seriously disturb the order of increase in the various quarters, it very materially reduced the margins between the highest and the lowest quarters.

The other disturbance referred to was the influenza epidemic of 1919. The total number of deaths during 1919, for which influenza was stated to be the primary cause, was 11,989, which were distributed over the four quarters of the year as follows:—March quarter, 926; June quarter, 5,958; September quarter, 4,658; December quarter, 447. Prior to this epidemic, the September quarter had been consistently the highest, and the June quarter had been, almost invariably, next in order during each decade from 1901–10 to 1909–18, while the March quarter had been almost consistently the lowest. The same consistency, however, did not prevail throughout the individual years. The deaths from influenza in the June and September quarters, and the comparative freedom of the March quarter from such deaths, have given the March quarter precedence in the four successive decennial periods in which the year 1919 is included. During the same periods, the September quarter has been consistently second, and the December quarter has most frequently been the lowest.

The precedence—with regard to its contribution to the natural increase in population—which was so consistently held by the September quarter prior to the influenza epidemic of 1919, was due entirely to its higher birth rate. With the exception of the year 1915, the September quarter was distinguished by a greater number of births than any other quarter in each of the 19 years 1906–24, and with the exception of 1915 and 1919, it showed the greatest birth rate per 1,000 persons. On the other hand, with the same two exceptions, the September quarter showed the highest death rate per 1,000. The high death rate in conjunction with the high birth rate is due in some measure to the increased risk, from the greater number of births, of infantile deaths and deaths due to childbirth.

POPULATION.—AVERAGE QUARTERLY NATURAL INCREASE, 1916 TO 1925.

State or Territory.	Average Natural Increase for Quarter ended on last day of—								Average Natural Increase per Annum. 1916–25.	
	March.		June.		September.		December.			
	Persons.	°/°°	Persons.	°/°°	Persons.	°/°°	Persons.	°/°°	Persons.	°/°°
N.S.W.	8,391	4.08	7,774	3.76	8,042	3.88	8,206	3.93	32,413	15.77
Victoria	4,682	3.09	4,421	2.90	4,498	2.95	4,720	3.08	18,321	12.10
Q'land.	3,079	4.14	3,141	4.20	3,059	4.04	2,961	3.88	12,240	16.45
S. Aust.	1,748	3.61	1,703	3.50	1,646	3.37	1,658	3.38	6,755	13.95
W. Aust.	1,219	3.70	1,207	3.65	1,174	3.53	1,109	3.31	4,709	14.28
Tas. ..	877	4.19	835	4.02	895	4.34	880	4.27	3,487	16.68
N. Ter.	3	0.72	4	0.96	3	0.71	−3	−0.71	7	1.68
F.C.Ter.	7	3.11	5	1.68	8	2.64	7	2.26	27	11.99
Total	20,006	3.74	19,090	3.56	19,325	3.58	19,538	3.61	77;959	14.59

NOTE.—The minus sign (—) indicates an excess of deaths over births, and °/°° denotes "per thousand."

2. **Variations in Net Immigration.**—In the following table the figures relating to the separate States and Territories include interstate migrants, but so far as these persons are concerned, the arrivals into any State are departures from some other State, so that they do not affect the figures shown for Australia as a whole, which, therefore, represent the oversea arrivals and departures. For each of the decades from 1901–1910 to 1904–1913 inclusive, the December quarter showed the greatest rate of increase from migration, with the other quarters consistently in order directly reverse to their position on the calendar. The despatch of troops from Australia during November and December, 1914, and the effects of the war on the oversea passenger traffic, altered the position so that in the decade 1905–14, and each decade since, the September quarter has been the highest, with the March quarter second. On the average, however, of the three years 1923–25 which were not affected by the movements of the troops, the December quarter again has first place. The precedence of the December quarter during the last three years was due both to the small number of departures (23.30 per cent.) and to the large number of arrivals (29.86 per cent.) during that quarter. The normal quota for each quarter would of course be 25 per cent. in both cases. Notwithstanding that the interstate movement is very much greater than the oversea migration, the results shown in the following table are to some extent vitiated in their application to the particular States, by the inclusion of the war period. For instance, the losses shown for New South Wales and for Victoria in the June quarter, and for South Australia in the March and June quarters are entirely due to large embarkations of troops during those periods of the years 1915 and 1916. Although it is usual for Queensland to show a loss of population during the December quarter, owing to the return of sugar workers and tourists to the southern States, the loss for the decade 1916–25 is aggravated by the despatch of troops. Western Australia shows an increase of population by migration, for each quarter with the exception of the December quarter, when the losses recorded were accentuated by the departure of troops overseas. The gain to Tasmania in the December quarter represents the influx of tourists from the mainland, whereas the departure of tourists and of other persons during the remainder of the year represents an average net annual loss of 1,537 persons.

POPULATION.—AVERAGE QUARTERLY NET IMMIGRATION, 1916 TO 1925.

State or Territory.	Quarter ended on last day of—								Average Net Immigration per Annum, 1916–25.	
	March.		June.		September.		December.			
	Persons.	°/°°	Persons.	°/°°	Persons.	°/°°	Persons.	°/°°	Persons.	°/°°
N.S.W.	2,136	1.04	– 319	– 0.15	4,051	1.95	2,219	1.06	8,087	3.93
Victoria	3,037	2.01	– 467	– 0.31	1,643	1.08	3,423	2.23	7,636	5.04
Q'land	1,119	1.50	6,512	8.70	2,025	2.67	–4,284	– 5.61	5,372	7.22
S. Aust.	– 23	– 0.05	– 89	– 0.18	1,267	2.60	2,654	5.41	3,809	7.86
W. Aust.	38	0.12	593	1.79	692	2.08	– 481	– 1.44	842	2.55
Tas. ..	–2,265	–10.83	–2,395	–11.53	– 755	– 3.66	3,878	18.80	–1,537	– 7.35
N.T. ..	19	4.57	48	11.49	– 42	–9.93	– 115	– 27.44	– 90	–21.66
F.C.Ter.	712	316.16	56	18.86	33	10.88	– 617	–199.35	184	81.71
Total	4,773	0.89	3,939	0.73	8,914	1.65	6,677	1.23	24,303	4.55

NOTE.—The minus sign (–) denotes excess of departures over arrivals, and °/°° denotes "per thousand" of population.

§ 6. Influences affecting Increase and Distribution.

1. **Mineral Discoveries.**—The discovery of gold in Australia in 1851 was undoubtedly one of the most influential factors in bringing about a rapid settlement of the country. Its effect may be gauged by comparing the increase during the ten years preceding with that during the ten years succeeding the discovery. From 31st December, 1840 to 31st December, 1850, the increase was only 214,948 (from 190,408 to 405,356). During the succeeding decennium there was an increase of 740,229, the population advancing to 1,145,585 on 31st December, 1860. In 1861, owing to the opening up of the New Zealand goldfields, a rush of population from Australia set in, the result being that the net increase per annum to the population of Australia, which in 1855 amounted to 98,343, and even in 1860 was as much as 48,280, fell in 1861 to 22,564. In fact, during the year 1861 the departures from Australia exceeded the arrivals by 6,283, the gain of 22,564 being due to the births exceeding the deaths by 28,847.

In 1886 and subsequent years the gold discoveries of Western Australia led to such extensive migration to that State that its population, which on 31st December, 1885, amounted to only 35,959, increased during the next twenty years by 595 per cent., or by 10.18 per cent. per annum, to 250,138 in 1905. In this case, however, the additions to the population of the western States were largely drawn from the eastern States, so that the actual gain of population to Australia was relatively small.

2. **Pastoral Development.**—Very early in the colonization of Australia it was recognized that large areas were well adapted for pastoral pursuits, and pastoral developments led to the spread of population in various directions. As the numbers engaged in connexion therewith, compared with the value of the interests involved, are relatively small, and as pastoral occupancy tends to segregration rather than aggregation of population, the growth of the pastoral industry is not noticeably reflected in the population statistics.

3. **Agricultural Expansion.**—At the present time the area under crop in Australia is over 17¼ million acres. Although substantial in itself, this area, viewed in relation to the total area of Australia, is relatively small, and represents only 0.91 per cent. of the total area. Per head of population the area under crop, however, is 2.9 acres, a fairly large area when allowance is made for the recency of Australian settlement. About 80 per cent. of the area under crop in 1924–25 was devoted to the production of wheat and hay, both of which, for profitable production in Australia, require a considerable area in the one holding. Consequently, the agricultural districts are for the most part sparsely populated, though in a less marked degree than the pastoral areas.

4. **Progress of Manufacturing Industries.**—One direct effect of the development of manufacturing industries is the concentration of population in places offering the greatest facilities for the production of particular commodities. In Australia, where manufacturing industries are as yet in their infancy, the tendency throughout has been to concentrate the manufacturing establishments in each metropolis. This has accentuated the growth of the capital cities to an extent which, when compared with that of the rest of the country, appears somewhat abnormal.

5. **Influences of Droughts.**—Droughts, which at times so seriously affect the agricultural and pastoral industries of Australia, have a marked influence on the distribution of population. Districts, which in favourable seasons are fairly populous, become more or less depopulated in times of drought. This movement, however, ordinarily affects only the internal distribution of the population, and not the total, but severe drought may even make its influence felt in the statistics of the total population. Thus, in the case of the drought of 1902–3, the departures from Australia exceeded the arrivals for the two years 1903 and 1904 by 12,859. It may be noted also, that for the former of these years, the natural increase of population by excess of births over deaths was abnormally low, being only 51,150, as compared with 54,698 in the preceding, and 60,541 in the succeeding year. As the solution of the problem of dealing with droughts is advanced, their influence will be less marked.

6. **Assisted Immigration.**—Assisted immigration has been a factor of some importance in the increase of population. The number of persons brought to Australia by this means has varied considerably in different periods, according to the activities of Governments in this direction. The table given in sub-section 5 of § 10 hereinafter shows that 964,299 persons have been brought to Australia in connexion with schemes for assisting immigration.

7. **Other Influences.**—(i) *Commercial Crises.* The effect on population of a commercial crisis, such as that which occurred in the early nineties of last century, is clearly indicated by comparing the migration statistics of Australia for the five years 1887 to 1891 with those for the five years 1892 to 1896. During the earlier periods the arrivals exceeded the departures by 146,872, whereas in the later period the excess of arrivals was only 2,064.

(ii) *War.* The war in South Africa left its impress on the population statistics of Australia, the departures during 1899 and 1900 exceeding the arrivals by 10,546. The effect of the recent European war is, of course, much more marked.

§ 7. Density.

1. **General.**—From certain aspects population may be less significant in respect of its absolute amount than in its relation to the area of the country. Australia, with an area of 2,974,581 square miles, and a population on 31st December, 1925, of 6,052,084 including aboriginals, has a density of only 2.02 persons to the square mile, and is, therefore, the most sparsely populated of the civilized countries of the world. For the other continents the densities are approximately as follows :—Europe, 122 ; Asia, 64 ; Africa, 10 ; North and Central America, 18 ; and South America, 9 The population of Australia has thus about 21 per cent. of the density of South America ; about 20 per cent. of that of Africa ; about 11 per cent. of that of North and Central America ; about 3 per cent. of that of Asia ; and about 1½ per cent. of that of Europe.

A map showing the density of population throughout Australia as at the Census of 1921 accompanies this chapter.

Particulars concerning the number and density of the population of the various countries of the world for the latest dates for which such information is available are given in the following table. These figures have in the main been taken from the 1926 issue of the "Statesman's Year Book," and in some instances, more particularly in the cases of Asia and Africa, must be considered as rough approximations only, complete data not being obtainable.

POPULATION, WORLD'S.—NUMBER AND DENSITY.

Country.	Population.	Density (*a*).
EUROPE.		
Russia	110,011,223	65.45
Germany	62,539,098	343.22
Great Britain	48,225,032	396.48
Italy	42,115,606	352.07
France	39,209,518	184.38
Poland	27,184,836	182.01
Spain (including Canary and Balearic Islands)	21,966,641	112.77
Rumania	17,393,149	142.24
Czecho-Slovakia	13,613,172	251.13
Jugo-Slavia	12,017,323	125.01
Hungary	8,274,940	230.43
Belgium	7,811,876	664.73
Netherlands	7,315,046	554.00
Austria	6,535,759	201.91
Sweden	6,036,118	34.87
Portugal	6,032,991	169.99
Greece	5,810,221	118.52
Bulgaria	5,033,900	126.44
Switzerland	3,917,800	245.25
Finland	3,495,186	26.37
Denmark	3,441,008	200.71
Norway	2,649,775	21.20
Georgia	2,372,403	93.00
Lithuania	2,175,121	36.48
Azberbaijan	2,096,973	62.34
Turkey	1,891,000	173.77
Latvia	1,844,805	73.79
Estonia	1,110,538	65.50
Albania	831,877	47.88
Danzig	386,000	511.94
Luxemburg	260,767	261.03
Malta	224,680	1841.64
Iceland	98,370	2.48
Monaco	22,956	2869.50
Gibraltar	20,638	10319.00
San Marino	12,027	316.50
Liechtenstein	10,716	164.89
Andorra	5,231	27.39
Spitzbergen	1,197	0.05
Total	473,995,517	122.45
ASIA.		
China and Dependencies	436,094,953	101.91
British India	247,003,293	225.72
Japan and Dependencies	83,454,371	320.07
Feudatory Independent States	71,939,000	101.18
Netherlands East Indies	49,155,374	85.79
Russia in Asia	18,603,074	3.41
Afghanistan	12,000,000	48.98
Turkey, including Armenia and Kurdistan	11,466,000	23.71
Philippine Islands	11,234,409	97.67
Persia	10,000,000	15.92
Siam	9,207,355	46.00
Tonking	7,160,113	176.66
Annam	5,731,189	144.15
Nepal	5,600,000	103.70
Arabia	5,000,000	5.00
Ceylon	4,861,670	191.92
Cochin China	4,001,093	151.12
Syria	3,000,000	50.00
Bokhara	3,000,000	37.76
Iraq	2,849,282	19.89
Cambodia	2,465,581	36.50
Federated Malay States	1,418,455	51.57
Armenia	1,214,391	80.48
Malay Protectorate, including Johore	1,123,264	49.95
Kwantung	978,766	1,819.27
ASIA—*continued.*		
Straits Settlements	960,952	600.60
British Borneo, Brunei and Sarawak	883,248	11.45
Laos	850,000	10.29
Hong Kong and Dependencies	799,550	2,044.88
Palestine	757,182	84.13
Goa, etc.	548,472	334.84
Khiva	519,000	21.35
Oman	500,000	6.10
Timor, etc.	377,815	51.54
Cyprus	310,709	86.69
French India	277,516	1,415.90
Bhutan	250,000	12.50
Kwan Chau Wan	208,044	1,094.97
Weihaiwei	154,416	541.81
Bahrein Islands	120,000	480.00
Macao, etc.	74,866	18,716.50
Maldive Islands	70,000	608.70
Aden and Dependencies	54,923	6.10
Total	1,016,278,326	63.63
AFRICA.		
Nigeria and Protectorate	18,070,608	53.83
Egypt	14,055,000	36.70
Abyssinia	10,000,000	28.57
Belgian Congo	8,512,795	9.36
Union of South Africa	7,407,932	15.68
Anglo-Egyptian Sudan	5,825,247	5.74
Algeria	5,806,090	26.13
Morocco	5,400,000	24.13
Tanganyika Territory	4,139,429	11.34
Angola	4,119,000	8.50
Madagascar	3,471,007	15.45
Uganda Protectorate	3,145,449	28.52
Portuguese East Africa	3,120,000	7.29
Upper Volta	3,018,597	19.55
French Equatorial Africa	2,845,936	2.90
French Sudan	2,561,515	3.95
Kenya Protectorate	2,491,059	10.17
Tunis	2,095,190	43.38
Gold Coast and Protectorate	2,078,043	25.98
French Guinea	2,026,321	21.87
Liberia	2,000,000	50.00
Rhodesia	1,917,578	4.36
Ivory Coast	1,545,680	12.67
Sierra Leone and Protectorate	1,541,311	49.72
French Cameroon	1,500,000	9.01
Senegal	1,225,523	16.54
Territory of the Niger	1,221,761	3.02
Nyasaland Protectorate	1,212,475	32.00
Dahomey	842,243	19.84
Tripolitania and Cyrenaica	800,435	1.38
French Sahara	800,000	0.53
Togoland (French)	762,453	34.66
British Cameroons	660,000	21.29
Italian Somaliland	650,000	4.22
Spanish Morocco	600,000	77.92
Basutoland	498,781	42.57
Eritrea	407,044	8.90
Mauritius and Dependencies	394,037	487.07
Somaliland Protectorate	344,000	5.06
Portuguese Guinea	289,000	20.73
Mauritania	284,699	0.82
South-West Africa	227,732	0.71
Zanzibar	216,790	212.54
French Somaliland	208,000	35.92
Gambia and Protectorate	200,000	48.38

(*a*) Number of persons per square mile.

POPULATION, WORLD'S.—NUMBER AND DENSITY—*continued.*

Country.	Population.	Density, (*a*).
AFRICA—*continued.*		
Togoland (British)	188,265	14.94
Réunion	172,190	177.52
Bechuanaland Protectorate	152,983	0.56
Cape Verde Islands	149,793	101.21
Spanish Guinea	140,000	12.95
Swaziland	133,563	20.00
Comoro and Mayotte	119,305	151.02
St. Thomas and Principe	58,907	163.63
Seychelles	25,847	165.69
Fernando Po, etc.	23,846	29.99
Ifni	20,000	20.73
Sokotra	12,000	8.68
St. Helena	3,703	78.79
Rio de Oro and Adrar	495	0.004
Ascension	250	7.35
Total	131,739,907	10.40
NORTH AND CENTRAL AMERICA.		
United States of America	114,311,000	37.77
Mexico	14,234,799	18.55
Canada	9,364,200	2.51
Cuba	3,368,923	76.28
Haiti	2,031,000	199.04
Guatemala	2,004,900	47.34
Salvador	1,580,000	119.91
Porto Rico	1,299,809	378.40
Jamaica, Including Turks and Caicos Islands, etc.	904,405	204.11
Santo Domingo	897,045	46.40
Honduras	773,408	17.47
Nicaragua	638,119	12.35
Costa Rica	507,193	22.05
Trinidad and Tobago	381,753	193.19
Newfoundland and Labrador	262,299	1.61
Martinique	244,439	634.91
Guadeloupe and Dependencies	229,839	334.07
Windward Islands	168,197	325.96
Barbados	159,499	960.84
Leeward Islands	122,242	170.97
Curacao	56,522	140.25
Bahamas	55,423	12.58
Alaska	55,036	0.09
British Honduras	47,132	5.48
Virgin Islands	26,051	197.36
Bermudas	23,820	1,253.68
Greenland	14,355	0.31
St. Pierre et Miquelon	3,918	42.13
Total	153,765,326	17.88

Country.	Population.	Density (*a*).
SOUTH AMERICA.		
Brazil	30,635,605	9.33
Argentine Republic	9,839,431	8.53
Colombia	6,617,833	15.01
Peru	5,550,000	10.43
Chile	3,944,142	13.61
Bolivia	2,990,220	5.82
Venezuela	2,563,334	6.51
Ecuador and Galapagos	2,000,000	11.48
Uruguay	1,640,214	22.73
Paraguay	1,000,000	16.22
Panama Republic	442,486	13.67
British Guiana	301,204	3.37
Dutch Guiana	135,754	2.50
French Guiana	44,202	1.27
Panama Canal Zone	27,151	51.81
Falkland Islands and South Georgia	3,534	0.63
Total	67,735,110	9.49
OCEANIA, ETC.		
Australia	(*b*) 6,052,084	2.03
New Zealand	1,464,093	14.10
Territory of New Guinea	353,045	3.88
Papua	276,371	3.05
Hawaii	255,912	39.68
Dutch New Guinea	195,460	1.22
Fiji	157,266	22.20
Solomon Islands (British)	150,583	13.69
New Hebrides	60,000	10.53
New Caledonia	57,208	6.69
Marshall Islands, etc.	52,219	54.39
Western Samoa	38,230	30.58
Gilbert and Ellice Islands Colony	36,122	35.73
French Oceania	31,703	20.86
Tonga	24,935	64.77
Guam	15,789	75.19
Samoa (American)	8,194	106.42
Nauru	2,174	217.40
Norfolk Island	726	55.85
Total	9,232,114	2.66
SUMMARY.		
Europe	473,995,517	122.45
Asia	1,016,278,326	63.63
Africa	131,739,907	10.40
America, North and Central	153,765,326	17.88
America, South	67,735,110	9.49
Oceania, etc.	9,232,114	2.66
Total	1,852,746,300	35.83

(*a*) Number of persons per square mile. (*b*) Including 60,000 aboriginals.

2. **Position of the British Empire.**—The approximate relationship of the British Empire to the world as a whole in regard to its area and population is given hereunder :—

BRITISH EMPIRE IN RELATION TO THE WORLD.

Particulars.	The World.	British Empire.
Area in square miles (exclusive of Polar Circles)	52,000,000	13,403,000
Population	1,853,000,000	453,000,000
Population per square mile	35.8	33.8

§ 8. General Characteristics.

1. Sex Distribution.—(i) *General.* The distribution of the sexes in the populations of young countries shows marked contrasts to that of older countries. In young countries there will be, invariably, a greater number of males than females, whereas in countries which have been long settled the females predominate. In the older countries the populations have grown almost entirely by the excess of births over deaths, which tends towards equality in the numbers of the sexes. The table on page 877, however, shows that in many instances, this natural tendency has been deflected to an excess of females. This has been due possibly to the following causes—(*a*) preponderance of males amongst emigrants; (*b*) greater propensity of males to travel; (*c*) employment of males away from the home country in the army, navy, and mercantile marine; (*d*) effects of war. In a young country, on the other hand, the increase in the population is largely brought about by immigration, in which males preponderate. The pioneering conditions of a young country, naturally, are less attractive to females than to males, and in the case of Australia, the disabilities inseparable from the early stages of settlement were aggravated by the great distance from the mother country.

Information regarding the sexes of the first settlers in Australia is not available, but on the 31st December, 1796—nearly nine years later—there was an excess of 44 males in every 100 of a total population of 4,100.

The subsequent development of the natural industries of the country attracted male rather than female immigrants, and notwithstanding the equalizing tendency of the expanding factor of natural increase, and the heavy loss of males through the war, the population of Australia, on the 31st December, 1925, contained an excess of 2.15 males in every 100 persons.

The relation between the degree of development of a country and the masculinity of its population is exemplified by the conditions in the various Australian States. The table on page 855 shows that the greatest masculinity is associated with the smallest density of population, *i.e.*, the masculinity is greatest in the less developed States. For instance, in Queensland, which embraces over 22 per cent. of the area of Australia, but which holds only 14 per cent. of the total population (1.28 persons per sq. mile) the masculinity is 5.63, and in Western Australia, where the density of population is less (0.38 persons per sq. mile), the masculinity is greater (7.26). On the other hand, in Victoria, where the density is greatest (19.16 persons per sq. mile), there is an excess of females of 0.39 per 100 persons. In fact, if either New South Wales or South Australia be excluded, the masculinity indexes for all the other States will fall in reverse sequence to the indexes to density.

The position in South Australia is somewhat unusual, inasmuch as the people of that State are concentrated within a relatively small area, while a large portion of the area carries no population, and the masculinity, therefore, is governed by the density of the populated area.

(ii) *Masculinity.* On pages 163 to 165 in the second issue of this publication a table was included showing the masculinity of the population of each of the States for each year from 1796 to 1907. In the fifth issue, on page 123, the figures in this table for the years 1901 to 1907 were modified in accordance with the results of the Census of 3rd April, 1911.

The figures given in those tables showed the number of males to each 100 females, but it is considered that a more satisfactory index is obtained by computing the ratio of the excess of males over females to the total population. This ratio, expressed as a percentage, has been adopted as the "masculinity" of the population, and the ratios so computed are given hereunder for intervals of ten years from 1800 to 1910 and for the five years 1921 to 1925 :—

POPULATION.—MASCULINITY, 1800 TO 1925.

(EXCESS OF MALES OVER FEMALES PER 100 OF POPULATION.)

Year.	States.						Territories.		Australia.
	N.S.W.(*a*)	Victoria.	Q'land.	S.A.(*b*)	W. Aust.	Tasmania.	Northern (*c*)	Fed. Cap. (*d*)	
1800	44.91	..	..	..	..	..	..	..	44.91
1810	31.16	..	..	..	..	..	..	..	31.16
1820	41.81	..	..	..	..	..	..	..	41.81
1830	52.06	..	..	..	49.66	49.17	..	..	51.02
1840	34.25	..	..	13.08	24.10	39.31	..	..	33.72
1850	16.13	..	..	12.72	21.51	28.44	..	..	17.76
1860	13.53	22.74	19.88	2.47	25.07	10.56	..	..	16.72
1870	9.29	9.74	20.10	2.84	23.42	6.09	..	..	9.54
1880	9.28	4.95	17.53	6.69	14.92	5.53	..	..	7.95
1890	8.28	5.06	13.87	4.12	18.98	5.61	..	..	7.43
1900	5.28	0.61	11.24	1.98	22.34	3.83	76.57	..	5.01
1910	4.41	−0.65	8.69	1.54	14.13	2.03	65.89	..	3.79
1921	1.92	−1.35	5.41	0.37	6.34	0.80	45.58	9.30	1.60
1922	1.95	−0.82	5.49	0.34	6.74	0.03	43.06	12.87	1.77
1923	2.03	−0.76	5.60	1.13	7.08	0.01	42.17	7.32	1.93
1924	2.09	−0.53	5.43	1.65	7.29	−0.32	41.12	9.61	2.05
1925	1.95	−0.39	5.63	2.53	7.26	−0.43	39.50	13.31	2.15

(*a*) Including Federal Capital Territory prior to 1911. (*b*) Including Northern Territory prior to 1900. (*c*) Included with South Australia prior to 1900. (*d*) Part of New South Wales prior to 1911.

NOTE.—The minus sign (—) denotes excess of females over males per 100 of population.

The table shows the progress towards equalization of the sexes as the country developed, and conditions suitable to family life became more general.

The war naturally had a great affect on the masculinity of the population. In 1913 there was in Australia as a whole an excess of 4.41 males in every 100 persons, but by 1918 the excess was on the side of females to the extent of 0.96 per 100 persons. This excess of females was experienced in Victoria, South Australia, and Tasmania, but, largely by the return of the military forces, the excess of males was restored in all States except Victoria ; subsequent changes, however, brought about an excess of females over males in Tasmania.

Graphs showing the masculinity of the population of each State and of Australia accompany this chapter.

The difference between young and old countries in the masculinity of their populations is clearly illustrated by the comparisons furnished in the following table, which are based on the latest statistics available. It is interesting to note that of the countries named, Chile is the only non-European country with an excess of females :—

POPULATION OF VARIOUS COUNTRIES.—MASCULINITY.

Country.	Year.	Excess of Males over Females in each 100 of Population.	Country.	Year.	Excess of Males over Females in each 100 of Population.
Argentine Republic	1918	7.27	Italy	1911	−1.81
Ceylon	1921	5.91	Jugo-Slavia	1921	−1.92
British India	1921	2.73	Denmark	1921	−2.44
India (Feudatory States)	1921	2.73	Norway	1920	−2.60
Union of South Africa(*a*)	1926	2.17	Hungary	1921	−2.97
Australia	**1925**	**2.15**	Prussia	1925	−3.00
New Zealand	1925	2.12	Northern Ireland	1924	−3.05
United States of America	1920	1.98	Spain	1920	−3.07
Irish Free State	1924	0.98	Poland	1921	−3.37
Rumania	1919	0.75	Bavaria	1925	−3.42
Japan	1925	0.48	German Empire	1925	−3.47
Canada	1921	0.31	Switzerland	1920	−3.69
Chile	1920	−0.57	Scotland	1924	−3.83
Greece	1920	−0.62	Great Britain	1924	−4.22
Bulgaria	1924	−0.78	Austria	1920	−4.24
Belgium	1925	−1.19	England and Wales	1924	−4.27
Finland	1923	−1.23	Portugal	1920	−5.23
France	1911	−1.74	Netherlands	1923	−7.29
Sweden	1924	−1.78	Russia (European)	1920	−9.56

NOTE.—The minus sign (—) denotes excess of females over males in each 100 of population.
(*a*) White population only.

2. **Age Distribution.**—(i) *Australia.* The causes which brought about the excess of males also made the age constitution of the population of Australia essentially different from that of older countries. The high birth rate of the earlier years, coupled with the low average age of immigrants, produced a population in which young and middle-aged persons were above, and the persons of advanced ages were below, the normal proportions. With time, however, these differences have been modified, so that they are no longer important.

The following table shows the proportions in three main groups of ages, of the population of Australia over a period of 60 years in decennial periods from 1861, and of England and Wales for 1861, 1911 and 1921. The percentages are in all cases based on Census results. The Australian figures for 1861 include the results of the Western Australian Census of 1859, and those for 1871 include the results of the Western Australian and Tasmanian Censuses of 1870.

Throughout the period covered by the table, the age distribution of the Australian population has varied considerably in consequence of the fluctuations of the birth-rate and of net migration.

There is a steady approach to similarity in the age composition of males to that of females in harmony with the equalization of the numbers of each sex, and an increasing similarity in the composition of the Australian population to that of England and Wales.

POPULATION.—AGE DISTRIBUTION.

AUSTRALIA, 1861 TO 1921.

Census Year.	Males.				Females.				Persons.			
	Under 15 Years.	15 and under 65.	65 and over.	Total.	Under 15 Years.	15 and under 65.	65 and over.	Total.	Under 15 Years.	15 and under 65.	65 and over.	Total.
	%	%	%	%	%	%	%	%	%	%	%	%
1861..	31.41	67.42	1.17	100	43.03	56.20	0.77	100	36.28	62.72	1.00	100
1871..	38.84	59.11	2.05	100	46.02	52.60	1.38	100	42.09	56.17	1.74	100
1881..	36.37	60.85	2.78	100	41.89	56.07	2.04	100	38.91	58.65	2.44	100
1891..	34.77	62.02	3.21	100	39.36	58.08	2.56	100	36.90	60.20	2.90	100
1901..	33.87	61.82	4.31	100	36.50	59.85	3.65	100	35.12	60.88	4.00	100
1911..	30.84	64.82	4.34	100	32.52	63.28	4.20	100	31.65	64.08	4.27	100
1921..	31.67	63.86	4.47	100	31.80	63.83	4.37	100	31.73	63.85	4.42	100

ENGLAND AND WALES, 1861, 1911, AND 1921.

Census Year.	Males.				Females.				Persons.			
	Under 15 Years.	15 and under 65.	65 and over.	Total.	Under 15 Years.	15 and under 65.	65 and over.	Total.	Under 15 Years.	15 and under 65.	65 and over.	Total.
1861..	36.70	58.97	4.33	100	34.62	60.44	4.94	100	35.64	59.72	4.64	100
1911..	31.70	63.66	4.64	100	29.64	64.62	5.74	100	30.64	64.16	5.20	100
1921..	29.24	65.34	5.42	100	26.32	67.06	6.62	100	27.72	66.24	6.04	100

(ii) *States and Territories.* The disparity in sex distribution in the States is accompanied by a corresponding inequality in age distribution. For convenient comparison in respect to ages, the several populations may each be divided into groups, indicative of dependence on the one hand, and ability to support on the other. The usual division for this purpose is into an initial group of "under 15" classed as "dependent age," a second group of "15 and under 65" classed as "supporting age," and a final group of "65 and upwards" classed "old age." From certain points of view the division might be into two classes, the "supporting" and the "dependent," as the majority of those aged "65 and upwards" strictly belong to the dependent class. The number and proportion of persons in each State and Territory at the Census of 4th April, 1921, in each of the three groups mentioned, were as follows :—

POPULATION.—DEPENDENT, SUPPORTING, AND OLD AGE GROUPS, 4th APRIL, 1921.

State or Territory.	Number of Persons of—				Proportion of Population of—		
	Dependent age (under 15).	Supporting age (15 and under 65).	Old age (65 and upwards).	All ages.	Dependent age (under 15).	Supporting age (15 and under 65).	Old age (65 and upwards).
States—					%	%	%
New South Wales	678,364	1,331,673	90,334	2,100,371	32.30	63.40	4.30
Victoria ..	455,936	1,002,093	73,251	1,531,280	29.78	65.44	4.78
Queensland ..	251,586	474,102	30,284	755,972	33.28	62.71	4.01
South Australia	156,636	313,242	25,282	495,160	31.63	63.26	5.11
Western Australia	107,394	214,553	10,785	332,732	32.28	64.48	3.24
Tasmania ...	73,444	130,265	10,071	213,780	34.36	60.93	4.71
Territories—							
Northern ..	804	2,858	205	3,867	20.79	73.91	5.30
Federal Capital	840	1,659	73	2,572	32.66	64.50	2.84
Australia ..	1,725,004	3,470,445	240,285	5,435,734	31.73	63.85	4.42

Victoria has the highest proportion of the population in the "supporting" age-group, while Tasmania has the lowest proportion. This high proportion in Victoria is largely due to the relatively low birth-rate in that State during the years which produced the lives under 15 years at the Census of 1921. The relatively small proportion of the population in the age group 15–65 in Tasmania is due to the fact that many Tasmanian natives, in their early adult years, seek the wider opportunities available on the mainland.

POPULATION.—IN AGE GROUPS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Age last Birthday.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
0– 4 ..	239,340	155,636	90,148	53,902	34,977	25,546	331	326	600,206
5– 9 ..	233,424	157,132	86,655	54,798	37,884	25,283	289	293	595,758
10–14 ..	205,600	143,168	74,783	47,936	34,533	22,615	184	221	529,040
15–19 ..	175,178	130,609	65,470	41,183	29,668	19,851	196	273	462,428
20–24 ..	172,086	129,599	66,317	40,238	25,769	17,772	285	245	452,311
25–29 ..	178,516	132,492	65,728	42,308	24,429	16,701	329	215	460,718
30–34 ..	180,372	122,683	62,858	41,261	24,296	15,562	345	238	447,615
35–39 ..	155,623	104,486	51,707	36,710	22,922	13,737	258	194	385,637
40–44 ..	129,060	92,799	43,321	29,880	22,885	11,858	262	151	330,216
45–49 ..	105,450	81,934	36,193	23,981	21,477	9,948	251	123	279,357
50–54 ..	91,822	80,565	32,513	22,096	18,444	9,247	295	74	255,056
55–59 ..	76,911	70,764	26,921	18,582	13,363	8,183	273	85	215,082
60–64 ..	62,105	53,676	20,925	15,874	8,967	6,867	229	61	168,704
65–69 ..	39,868	30,771	13,289	10,981	5,122	4,408	128	37	104,604
70–74 ..	25,047	19,239	8,152	6,790	2,955	2,697	53	13	64,946
75–79 ..	15,128	12,241	5 040	4,211	1,605	1,621	12	15	39,873
80–84 ..	6,769	6,822	2,610	2,100	684	887	3	4	19,879
85–89 ..	2,548	3,008	840	857	248	325	2	3	7,831
90 and over	664	988	214	252	53	91	..	1	2,263
Unspecified	4,860	2,668	2,288	1,220	2,451	581	142	..	14,210
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
Under 21..	889,082	613,454	330,556	206,070	142,801	97,181	1,060	1,183	2,281,387
21 and over	1,206,429	915,158	423,128	287,870	187,480	116,018	2,665	1,389	3,140,137
Unspecified	4,860	2,668	2,288	1,220	2,451	581	142	..	14,210
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

3. **Race and Nationality.**—(i) *General.* With regard to its racial characteristics, the population of Australia may be divided into two main groups, one comprising the aboriginal natives, and the other consisting of the various immigrant races which have made the country their home. [It will of course be understood that full-blood aboriginals are not counted in the population.] The term "immigrant races" naturally covers not only those residents of Australia who were born in other countries, but includes their descendants who were born in Australia.

(ii) *Aboriginals.* (*a*) *Early Estimates of Numbers.* The number of aboriginals in Australia at the advent of the white race has been estimated by various observers at somewhere in the vicinity of 150,000, but this figure must be regarded as a very rough approximation only.

(*b*) *Various Estimates from 1826 to 1921.* In 1826 the native black population in the settled districts of New South Wales numbered 3,019, this figure, however, offering little indication of the total for the whole State.

In Victoria an enumeration of the aboriginals in the settled districts in 1861 gave a total of 2,384, while at the Census of 1871, 1,330 were enumerated. In New South Wales 983 were counted in 1871 who were more or less in contact with white settlers, and it was estimated that 12,000 others were living in a wild and wandering condition.

At the Census of 1881 the aboriginals recorded in Victoria had dwindled to 780. In New South Wales the number enumerated was 1,643, while the unenumerated were estimated at 10,000. In South Australia (exclusive of the Northern Territory) the number counted and estimated was 6,346. In Queensland officers of the Police Department supplied an estimate of 20,585.

At the Census of 1891 the number in Victoria had decreased to 317. In New South Wales, where the first complete enumeration of the blacks was made, the number was returned as 5,097. In Western Australia 5,670 were enumerated, this figure, however, excluding natives not in contact with white settlers.

At the Census of 1911, 19,939 aboriginals were recorded for the whole of Australia, the figure again being exclusive of natives in unsettled areas.

At the Census of 1921 special efforts were made to obtain a reliable indication of the number of aboriginals living in the various States, including wild and wandering natives, as well as those in contact with the whites. Great difficulty was experienced in gaining anything like a reliable estimate in regard to the numbers of those in a wild state in Western Australia, the Northern Territory, and Queensland. The estimates gave a total of 60,300, distributed as follows:—New South Wales, 1,597; Victoria, 144; Queensland, 14,014; South Australia, 1,609; Western Australia, 25,587; Northern Territory, 17,349. (It may be mentioned here that the last representative of the Tasmanian aboriginals died in 1876.)

(c) *Census of Aboriginals in 1925.* A census of the aboriginal population taken in 1925 gave the following results:—

CENSUS OF ABORIGINALS, 1925.

State.	Full Bloods.					Half Castes.				
	Adults.		Children.		Total.	Adults.		Children.		Total.
	M.	F.	M.	F.		M.	F.	M.	F.	
New South Wales ..	455	301	173	152	1,081	1,641	1,260	1,531	1,553	5,985
Victoria	39	19	6	2	66	132	118	85	79	414
Queensland (*a*)	6,709	4,861	1,897	1,608	15,075	906	718	639	576	2,839
South Australia (*a*) ..	1,603	1,620	354	364	3,941	385	328	218	235	1,166
Western Australia ..	6,171	5,069	659	572	22,471*b*	775	651	463	434	2,323
Northern Territory ..	8,408	6,551	2,661	2,140	19,760	157	191	148	170	666
Total 1925	23,385	18,421	5,750	4,838	62,394	3,996	3,266	3,084	3,047	13,393
Total 1924	23,234	18,444	5,787	4,950	62,415	4,032	3,280	2,526	2,464	12,302

(*a*) The figures for Queensland and South Australia are for 1924; details for 1925 not available.
(*b*) Including 10,000 estimated as living outside the influence of Europeans.

NOTE.—In the case of aboriginals, all those twelve years of age and over are counted as adults, and the balance as children.

The figures for 1925 show a small increase over the total for 1921, but this increase is more apparent than real, and is due to underestimation in 1921 of the numbers of the wild and unapproachable natives. In South Australia, for example, tribes previously unknown have been found living west of Oodnadatta, near the boundary of Western Australia. Except in a few places where the blacks are under missionary influence, the numbers generally tend to decline, and the figures for New South Wales and Victoria, which are probably the most reliable, certainly evidence a rapid decline since the foundation of white settlement.

(*d*) *Decline in Numbers since 1891.* As evidence of the decline alluded to in the previous sub-section, a table is appended showing the numbers in the States of New South Wales and Victoria from 1891 onwards:—

NEW SOUTH WALES AND VICTORIA.—FULL-BLOOD ABORIGINALS, 1891 TO 1925.

State.	1891.	1901.	1911.	1921.	1924.	1925.
New South Wales ..	5,097	3,778	2,012	1,597	1,084	1,081
Victoria	317	250	196	144	74	66

The figures refer to full-blood aboriginals actually enumerated at the dates mentioned.

(iii) *Immigrant Races.* The immigrant races consist mainly of natives of the British Isles and their descendants. Of the total population (5,435,734) enumerated at the Census of 1921, 5,387,143, or over 99 per cent., were of European race. Of the remainder, 30,975 were full-blood, and 17,616 were half-caste non-Europeans.

The Census figures included all persons on board ships which were in Australian waters on the night of the Census, and 4,576 persons of full-blood and 49 half-castes of non-European race were thus enumerated. Amongst the 4,576 full-bloods were 1,018 Chinese, 1,330 Japanese, 942 Hindus, and 623 Malays.

The following table shows the number of full-blood and half-caste persons of non-European race—according to continental divisions—who were included in the Census of 1921. Of the 28,087 full-blood Asiatics, 17,157 were Chinese, 2,881 Hindus, 2,892 Syrians, 2,740 Japanese, and 1,087 Malays. The number of full-blood non-Europeans enumerated at the Census of 1921 was less than in 1911 by 6,814, or 18.03 per cent., whereas the half-caste non-Europeans had increased by 3,062, or 21.03 per cent. During the intercensal period the number of full-blood Chinese declined by 5,596, Japanese by 749, and Hindus by 418. The non-European element is relatively strongest in those parts of Australia where there are bêche-de-mer and pearl fisheries. More detailed information relating to the non-European races in the Australian population may be found in the Census Bulletins and Parts:—

POPULATION.—NON-EUROPEAN RACES, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	Australian.	Asiatic.		African.		American.		Polynesian.		Indefinite.		Total.	
	Half-caste Aboriginals.	Full-blood.	Half-caste.	Full-blood	Half-caste.	Full-blood	Half-caste	Full-blood	Half-caste.	Full-blood	Half-caste.	Full-blood.	Half-caste.
States—													
N.S. Wales ..	4,588	10,608	2,081	72	116	31	35	332	162	38	7	11,081	6,989
Victoria ..	442	4,292	1,255	15	40	8	19	8	8	23	1	4,346	1,765
Queensland ..	3,090	7,122	1,453	42	27	25	21	1,869	247	155	6	9,213	4,844
S. Australia ..	811	1,210	224	13	5	17	4	..	2	56	2	1,296	1,048
W. Australia	1,960	3,734	242	13	7	14	7	10	4	3	3	3,774	2,223
Tasmania ..	152	327	78	1	..	..	..	..	2	1	..	329	232
Territories—													
Northern ..	460	913	21	3	..	..	..	7	1	4	..	927	482
Federal Capital	33	9	..	..	..	..	..	..	..	..	..	9	33
Australia ..	11,536	28,215	5,354	159	195	95	86	2,226	426	280	19	30,975	17,616

The proportion of population of non-European race (exclusive of full-blood aboriginals) in each State and Territory is shown in the following table, full-blood and half-caste non-Europeans being shown separately:—

POPULATION.—NON-EUROPEAN RACES, PROPORTIONS, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	Total Population.	Non-European Race.					
		Full-blood.		Half-caste.		Total.	
		Number.	Number per 1,000 of Total Population.	Number.	Number per 1,000 of Total Population.	Number.	Number per 1,000 of Total Population.
States—							
N.S. Wales ..	2,100,371	11,081	5.27	6,989	3.33	18,070	8.60
Victoria ..	1,531,280	4,346	2.84	1,765	1.15	6,111	3.99
Queensland ..	755,972	9,213	12.19	4,844	6.41	14,057	18.60
S. Australia ..	495,160	1,296	2.62	1,048	2.11	2,344	4.73
W. Australia	332,732	3,774	11.34	2,223	6.67	5,997	18.01
Tasmania ..	213,780	329	1.54	232	1.09	561	2.63
Territories—							
Northern ..	3,867	927	239.70	482	124.64	1,409	364.34
Fed. Capital	2,572	9	3.50	33	12.83	42	16.33
Australia ..	5,435,734	30,975	5.70	17,616	3.24	48,591	8.94

(iv) *Biological and Sociological Significance.* The population of Australia is fundamentally British in race and nationality, and furnishes an example of the transplanting of a race into conditions greatly different from those in which it had been developed. The biological and sociological significance of this will ultimately appear in the physical and moral constitution produced by the complete change of climatic and social environment. The new conditions are likely to modify considerably the physical characteristics and the social instincts of the constituents of the population. At present, the characteristics of the Australian population, whether physical, mental, moral, or social, are only in the making, and probably a distinct Australian type will not appear until three or four generations more have passed. Even then, it is probable that, with the great extent of territory and differing conditions there will be a number of types varying with locality. At present the Australian is little more than a transplanted Briton, with the essential characteristics of his British forbears, with perhaps some accentuation of the desire for freedom from restraint. The greater opportunity for an open-air life, and the absence of the restricting conventions of older countries, may be mainly responsible for this development.

(v) *Nationality.* Prior to the Census of 1921 no attempt had been made to ascertain the allegiance of the people, except in so far as a person was or was not a British subject. At the last Census all persons were asked to state their nationality, and the results which are given in the following table, show that of a total population of 5,435,734, as many as 5,387,205, or over 99 per cent., were definitely stated to be British subjects. Of the foreign element, the Chinese are the most numerous, representing 30 per cent. of the foreign people and 2.56 in every 1,000 of the total population :—

POPULATION.—NATIONALITY (ALLEGIANCE), AUSTRALIA, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Nationality.	4th April, 1921.			Nationality.	4th April, 1921.		
	Males.	Females.	Persons.		Males.	Males.	Persons.
British	2,722,152	2,665,053	5,387,205	Foreign—*continued.*			
				Jugo-Slavian ..	502	107	609
Foreign—				Norwegian ..	960	65	1,025
Austrian ..	217	40	257	Polish	351	149	500
Belgian ..	171	106	277	Russian ..	1,655	662	2,317
Bulgarian ..	56	10	66	Spanish ..	405	140	545
Chinese ..	13,614	185	13,799	Swedish ..	1,399	80	1,479
Czecho-Slovakian	97	22	119	Swiss	413	151	564
Danish ..	956	260	1,216	Turkish ..	72	26	98
Dutch ..	1,430	187	1,617	U.S. of America..	2,520	737	3,257
Finnish ..	517	37	554	Other	1,042	376	1,418
French ..	1,221	867	2,088				
German ..	2,538	1,017	3,555	Total Foreign..	39,067	6,687	45,754
Greek ..	2,430	387	2,817				
Hungarian ..	28	7	35	Not stated ..	1,651	1,124	2,775
Italian ..	3,984	919	4,903				
Japanese ..	2,489	150	2,639	Grand Total..	2,762,870	2,672,864	5,435,734

(vi) *Birthplaces.* The proportion of native-born in the Australian population has increased rapidly in recent years. At the Census of 1921 the Australian-born numbered 4,581,663 persons, or 84.51 per cent. of a total population of 5,421,242 persons whose birthplaces were specified. Of the remainder, 676,387, or 12.48 per cent., were natives of the British Isles, and 38,611, or 0.71 per cent., were natives of New Zealand, so that 97.70 of the total population at that time had been born either in Australasia or in the British Isles. Excluding these, the following countries are the most important recorded as the birthplaces of persons in Australia at the Census of 1921 :—

Germany, 22,396 (0.41 per cent.); China, 15,224 (0.28 per cent.); Scandinavia (comprising Sweden, Norway, and Denmark), 14,341 (0.26 per cent.); Italy, 8,135 (0.15 per cent.); British India, 6,918 (0.13 per cent.); United States of America, 6,604 (0.12 per cent.); Union of South Africa, 5,408 (0.10 per cent.); Canada, 3,550 (0.07 per cent.)

The Australian-born element is lowest in Western Australia and Queensland, where the density of population is also least, but where the masculinity is greatest. On the other hand, in Tasmania, where the density is high and the masculinity is low, the proportion of Australian-born is highest. These related facts indicate that conditions throughout these territorially larger but less developed States hitherto have been, on the whole, less attractive to women and less conducive to the rearing of families than the conditions existing in the more settled States.

Information in greater detail respecting birthplaces will be found in Bulletins and other matter published in connexion with the Census of 1921.

POPULATION.—BIRTHPLACES AT CENSUS OF 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Birthplace.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
					PERSONS.				
Australia ..	1,772,614	1,330,136	592,163	436,991	248,866	196,245	2,536	2,112	4,581,663
New Zealand ..	19,266	11,210	2,949	1,218	2,540	1,360	41	27	38,611
British Isles ..	260,426	161,117	128,234	46,326	66,739	12,750	410	385	676,387
Other European Countries ..	19,948	13,266	20,064	6,371	7,256	951	168	18	68,042
Asia	11,036	5,218	6,745	1,518	4,410	711	638	16	30,292
Africa	2,769	2,004	741	473	577	192	16	3	6,775
America ..	5,244	3,022	1,763	754	971	279	34	5	12,072
Polynesia (*a*) ..	1,882	354	1,218	82	85	58	8	5	3,692
At Sea ..	1,283	1,111	589	394	234	92	4	1	3,708
Unspecified ..	5,903	3,842	1,506	1,033	1,054	1,142	12	..	14,492
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
					PERCENTAGE OF TOTAL POPULATION.				
	%	%	%	%	%	%	%	%	%
Australia ..	84.64	87.08	78.49	88.44	75.03	92.29	65.78	82.12	84.51
New Zealand ..	0.92	0.74	0.39	0.25	0.77	0.64	1.06	1.05	0.71
British Isles ..	12.43	10.55	17.00	9.37	20.12	6.00	10.64	14.97	12.48
Other European Countries ..	0.95	0.87	2.66	1.29	2.19	0.45	4.36	0.70	1.26
Asia	0.53	0.34	0.89	0.31	1.33	0.33	16.55	0.62	0.56
Africa	0.13	0.13	0.10	0.09	0.17	0.09	0.42	0.12	0.12
America ..	0.25	0.20	0.23	0.15	0.29	0.13	0.88	0.19	0.22
Polynesia(*a*) ..	0.09	0.02	0.16	0.02	0.03	0.03	0.21	0.19	0.07
At Sea ..	0.06	0.07	0.08	0.08	0.07	0.04	0.10	0.04	0.07
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(*a*) Includes Norfolk Island, Papua, and the Territory of New Guinea.

(vii) *Length of Residence of Immigrants.* At the Census of 1921 the population of Australia included 839,579 persons who were classed as immigrants, and the following table shows the number of years during which these people had resided in Australia. The number of persons whose length of residence is shown as less than one year is necessarily large, as it includes many persons, such as the crews of oversea ships, travellers, and others, who did not intend to remain in the country. The variations in the numbers with different periods of residence show the fluctuations in the volume of immigration. Thus the figures for length of residence groups 5–9 years and 10–14 years include those persons who arrived in Australia during the years 1911–1913 when immigration was large, those for the groups 30–44 years represent the arrivals during the boom period of the eighties of last century, while those for the groups 65–74 represent the survivors of the gold rush of the fifties.

POPULATION.—IMMIGRANT, LENGTH OF RESIDENCE IN AUSTRALIA, CENSUS, 4th APRIL, 1921.

Number of Completed Years of Residence.	Males.	Females.	Persons.	Number of Completed Years of Residence.	Males.	Females.	Persons.
0	28,386	19,827	48,213	60–64	10,372	11,671	22,043
1	8,375	16,998	25,373	65–69	11,378	13,594	24,972
2	2,026	2,490	4,516	70–74	2,875	3,669	6,544
3	1,715	1,404	3,119	75–79	716	935	1,651
4	2,779	2,623	5,402	80–84	519	693	1,212
5–9	111,895	87,723	199,618	85–89	78	124	202
10–14	58,919	31,883	90,802	90–94	16	15	31
15–19	15,077	7,818	22,895	95 and upwards..	1	—	1
20–24	18,875	8,990	27,865	Not stated ..	13,903	12,050	25,953
25–29	16,873	10,721	27,594				
30–34	47,206	32,273	79,479	Total ..	480,618	358,961	839,579
35–39	56,144	38,272	94,416	Born in Australia..	2,273,999	2,307,664	4,581,663
40–44	31,843	20,851	52,694	Birthplace not stated	8,253	6,239	14,492
45–49	16,616	11,776	28,392				
50–54	10,954	9,649	20,603	Total Population	2,762,870	2,672,864	5,435,734
55–59	13,077	12,912	25,989				

Further details are available from the Bulletins and Parts published in connexion with the Census of 1921.

4. Education.—(i) *General.* The information concerning educational attainments which can be satisfactorily collected at a Census is necessarily meagre. In Australia the particulars ascertained have never amounted to more than a statement as to whether or not a person could read and write. The results, therefore, merely divide the population into three main groups, viz. :—(*a*) Those who cannot read ; (*b*) those who can read but cannot write ; and (*c*) those able to read and write. Of the 5,435,734 persons who comprised the population of Australia on the 4th April, 1921, there were 805,798 who were definitely shown to be unable to read, and there were 86,641 persons whose ability in this direction was not stated. Thus, approximately 15 per cent. of the population were unable to read. Of the 805,799 persons returned as unable to read, 600,206, or 74.5 per cent., were under five years of age, and many of the remaining 25.5 per cent. were also children. Allowing for those persons whose ability to read and write was unspecified, it may be said that over 95 per cent. of the population over five years of age can read and write, and of those over ten years of age more than 98 per cent. can read and write. The number of persons returned at the Census of 1921 as able to read but unable to write was 14,493, of whom 943 could read a foreign language only. With the exception of New Zealand, there is probably no country in the world so strikingly unilingual as Australia.

POPULATION.—EDUCATION, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	English Language.		Foreign Language only.		Cannot Read.		Unspecified.	Australia.
	Read and Write.	Read only.	Read and Write.	Read only.	Under age 5 years.	Age 5 years and over.		
STATES—								
New South Wales ..	1,725,326	5,291	4,190	296	239,340	92,858	33,070	2,100,371
Victoria	1,309,334	2,838	2,558	230	155,636	39,971	20,713	1,531,280
Queensland ..	619,447	2,621	4,502	288	90,148	28,897	10,069	755,972
South Australia ..	411,256	1,476	1,030	64	53,902	18,046	9,386	495,160
Western Australia ..	273,079	743	2,485	57	34,977	13,224	8,167	332,732
Tasmania	170,743	566	120	5	25,546	11,796	5,004	213,780
TERRITORIES—								
Northern	2,331	7	325	3	331	657	213	3,867
Federal Capital ..	2,069	8	7	..	326	143	19	2,572
Australia ..	4,513,585	13,550	15,217	943	600,206	205,592	86,641	5,435,734

(ii) *Place of Education.* At the Census of 1921 the place of instruction was given for 1,023,462 persons, and of these 74.92 per cent. were attending State schools, 18.93 per cent. were at private schools, 2.44 per cent. at technical schools, 3 per cent. were receiving instruction at home, and 7 per thousand were attending universities. Of the males receiving instruction, 75.84 per cent. were at State schools, and 17.04 per cent. were at private schools; of the females 73.96 per cent. were at State schools and 20.90 per cent. at private schools.

POPULATION.—PLACE OF EDUCATION, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	Number being educated at—					Total.
	State School.	Private School.	Technical School.	University.	At Home.	
STATES—						
New South Wales	291,365	77,553	8,906	2,934	13,181	393,939
Victoria	203,625	59,788	8,097	2,663	5,772	279,945
Queensland	116,050	23,457	3,012	261	6,163	148,943
South Australia	72,397	14,382	1,599	990	2,042	91,410
Western Australia	50,356	12,299	2,585	267	1,932	67,439
Tasmania	32,459	6,204	512	137	1,540	40,852
TERRITORIES—						
Northern	239	58	..	..	50	347
Federal Capital	350	33	172	..	32	587
Australia	766,841	193,774	24,883	7,252	30,712	1,023,462

5. **Religions.**—At the Census of the 4th April, 1921, of a total population of 5,435,734, the number who objected to state their religion was 46,268; a further number of 45,990 failed to specify their religion in any degree; 20,544 stated that they had no religion; and 19,886 classed themselves in indefinite groups, such as "Freethinker," "Agnostic," "No Denomination," etc. Of those remaining (5,303,046), 5,267,641, or 99.33 per cent., were definitely stated to be Christians, and 35,405 were stated to be Non-Christians. The number who were definitely stated to be Christians represented nearly 97 per cent. of the total population. Of the total Christians, 2,372,995, or 45.04 per cent., belonged

to the Church of England; 1,134,002, or 21.53 per cent., to the Roman Catholic Church; 636,974, or 12.09 per cent., to the Presbyterian Church; and 632,629, or 12.01 per cent., were Methodists. Thus, the four denominations named embraced over 90 per cent. of the declared Christians. It is possible that the number given above for Roman Catholics may be somewhat understated, as some of those shown in the table as "Catholics undefined" were doubtless Roman Catholics.

POPULATION OF AUSTRALIA, CENSUSES OF 1901, 1911, AND 1921, ACCORDING TO RELIGION.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

RELIGION.	Census of 31st March, 1901.	Census of 3rd April, 1911.	Census of 4th April, 1921.
I. CHRISTIAN—			
Baptist	89,338	97,074	105,703
Catholic, Roman	850,620	921,425	1,134,002
Catholic, Greek	1,314	2,646	5,372
Catholic, Undefined	5,179	75,379	38,659
Church of Christ	24,192	38,748	54,574
Church of England	1,497,576	1,710,443	2,372,995
Congregational Independent	73,561	74,046	74,513
Lutheran	75,021	72,395	57,519
Methodist	504,101	547,806	632,629
Presbyterian	426,105	558,336	636,974
Protestant, Undefined	20,558	109,861	67,112
Salvation Army	31,100	26,665	31,589
Seventh Day Adventist	3,332	6,095	11,305
Unitarian	2,629	2,175	1,714
Others	21,823	31,320	42,981
Total, Christian	3,626,449	4,274,414	5,267,641
II. NON-CHRISTIAN—			
Hebrew	15,239	17,287	21,615
Buddhist	35,666	3,269	2,065
Chinese		3,283	3,591
Confucian		5,194	2,692
Mohammedan		3,908	2,868
Pagan		1,447	457
Others, Non-Christian	2,466	2,397	2,117
Total, Non-Christian	53,371	36,785	35,405
III. INDEFINITE—			
Freethinker	9,182	3,254	3,629
Agnostic	971	3,084	3,234
No Denomination	19,757	2,688	3,376
Others	1,101	5,647	9,647
Total	31,011	14,673	19,886
IV. NO RELIGION—			
Atheist	274	579	1,200
Others	6,505	9,437	19,344
Total	6,779	10,016	20,544
V. OBJECT TO STATE	42,131	83,003	46,268
VI. UNSPECIFIED	14,060	36,114	45,990
GRAND TOTAL	3,773,801	4,455,005	5,435,734

6. **Conjugal Condition.**—The number of persons whose conjugal condition was definitely stated at the Census of 4th April, 1921, was 5,421,191, of whom 2,753,740 were males and 2,667,451 were females. Of the 5,421,191 persons referred to, 1,998,662, or 36.86 per cent., were married, as compared with 33 per cent. in 1911; 237,821, or 4.39 per cent., were widowed; 8,528, or 0.15 per cent., were divorced; and 3,176,180, or 58.60 per cent., had never married. Of those who had never married, 1,725,004, or 54.31 per cent., were under 15 years of age. The proportion of married persons per cent. to the total population of the several States varied in the following order:—South Australia, 38.14; New South Wales, 37.40; Western Australia, 36.85; Victoria, 36.63; Tasmania, 35.88; Queensland, 35.32. On the basis of the adult population, the percentage of married persons in Australia was about 63.36, and in each State was approximately as follows:—Tasmania, 65.66; South Australia, 65.31; New South Wales, 64.78; Western Australia, 64.16; Queensland, 62.65; Victoria, 60.99.

POPULATION.—CONJUGAL CONDITION, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Conjugal Condition.	States.						Territories.		Australia
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
Never married—									
Under age 15 ..	678,364	455,936	251,586	156,636	107,394	73,444	804	840	1,725,004
Age 15 and over	540,267	434,010	206,632	126,301	87,241	54,297	1,709	719	1,451,176
Total never married	1,218,631	889,946	458,218	282,937	194,635	127,741	2,513	1,559	3,176,180
Married	783,730	559,677	266,307	188,798	121,635	76,482	1,076	957	1,998,662
Widowed ..	88,552	76,207	29,040	21,919	13,054	8,874	121	54	237,821
Divorced ..	4,609	2,313	488	384	610	118	5	1	8,528
Unspecified ..	4,849	3,137	1,919	1,122	2,798	565	152	1	14,543
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

7. **Occupations.**—(i) *General.* The following table shows, for each State and Territory and for Australia as a whole, the population grouped according to the various classes of occupations. The bulletins which have been published in connexion with the Census of 1921 give, in greater detail than is possible here, the occupations of the people of each State and Australia, and also give comparisons of the results of the Censuses of 1911 and 1921.

(ii) *Breadwinners.* Assuming that all of those persons whose occupations were not specified were breadwinners, there were at the Census of 1921, 2,341,211 breadwinners, representing 43.1 per cent. of the total population. At the Census of 1911, the breadwinners represented 44.5 per cent. of the population. Of the total male population, 67.8 per cent. were breadwinners in 1921, as compared with 68.9 per cent. in 1911. Of the female population the percentage of breadwinners was 17.5 in 1921, and 18.5 in 1911. The proportion of females to the total of breadwinners was almost identical at both periods, being slightly over 20 per cent.

(iii) *Industrial.* The decade 1911–1921 marks an interesting phase in the industrial development of Australia, inasmuch as, during that period, the persons engaged in manufacturing and other secondary processes became more numerous than those engaged in primary production. In 1911, the Industrial Class already had first place in New South Wales, Victoria, and South Australia, but in the other States the predominance of the Primary Class was such that, for Australia as a whole, the Primary Class was the greater. In 1921, the preponderance of the Industrial Class in New South Wales, Victoria, and South Australia had increased to such an extent, and at the same time the excess in favour of the primary industries, though still existent in Queensland, Western Australia, and Tasmania, had so diminished, that the number of persons engaged in industrial occupations throughout Australia exceeded those in the primary industries by 124,864, or by nearly 21 per cent. In 1911 the primary industries employed 39,711 persons, or 7.0 per cent., more than were employed in the industrial group. Of the total of 2,316,716 breadwinners recorded in 1921, 723,559, or 31.2 per cent., belonged to the Industrial Class, as compared with 562,337, or 28.7 per cent., of all breadwinners in 1911. The principal group within the Industrial Class is composed of the manufacturing industries. During the intercensal period, the number of persons engaged in manufacturing industries increased from 363,805, or 18.5 per cent., of all breadwinners in 1911, to 441,284, or 19 per cent., of breadwinners in 1921, an increase of 77,479, or 21.3 per cent.

(iv) *Primary Producers.* As mentioned in the preceding paragraph, the primary producers have ceased to be the most numerous of the occupational classes. In 1911 the primary producers recorded at the Census numbered 586,148, or 29.9 per cent., of all breadwinners, and although the number increased to 598,695, this greater number represented only 25.8 per cent. of the breadwinners in 1921. The number of persons engaged in Agriculture increased by 18.5 per cent., which was sufficient to increase slightly the proportion which the agricultural workers bore to the total breadwinners in 1911. The number engaged in the Pastoral Industries declined from 151,861 to 142,094, or by 6.4 per cent. The number engaged in Mining was less in 1921 by 39,038, or 36.9 per cent., having fallen to 66,766 from 105,804 in 1911. Those engaged in Forestry and in connexion with Water Supply, though still relatively few, increased substantially—the former by 24 per cent., and the latter by 53.5 per cent.

(v) *Commercial.* The number of persons recorded as engaged in commercial pursuits in Australia as a whole increased by 23.8 per cent. during the intercensal decade, the increases in the various States ranging from about 18 per cent. in Victoria and Tasmania to 30.5 per cent. in New South Wales. This class represented 15.3 per cent. of all breadwinners in Australia in 1921, as against 14.6 per cent. in 1911. The similar proportions in the various States in 1921 were :—New South Wales, 15.7 per cent. ; Victoria, 16.1 per cent. ; Queensland, 13.3 per cent. ; South Australia, 16 per cent. ; Western Australia, 14.9 per cent. ; and Tasmania, 12.2 per cent.

(vi) *Domestic.* Notwithstanding an increase in the number in the Domestic Class from 201,366 in 1911 to 209,971 in 1921, the class relatively to the total breadwinners declined from 10.3 per cent. in 1911 to 9.1 per cent. in 1921. For Australia as a whole the number in the Domestic Class increased by 8,605, of whom 6,868 were females. The number in this class was actually less in 1921 in Victoria by 6.4 per cent., and in Tasmania by 7.2 per cent, than in 1911, while in the other States the increases varied from 3.1 per cent. in Western Australia to 12.5 per cent. in South Australia.

(vii) *Transport and Communication.* The number of persons employed in connexion with transport and communication increased from 157,391, or 8 per cent., of all breadwinners in 1911, to 207,737, or 9 per cent, in 1921.

(viii) *Professional.* The Professional Class embraces all persons, not otherwise classed, who are mainly engaged in government and defence, and in ministering to the moral, intellectual, and social wants of the community. The number of persons in this class increased from 144,611 in 1911 to 201,319 in 1921, or by 39.2 per cent. The Professional Class represented 8.7 per cent. of all breadwinners in 1921, as compared with 7.4 per cent. in 1911.

POPULATION.—OCCUPATIONS, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Occupation.	States.						Territories.		Australia
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
Class									
I. Professional . .	77,776	60,585	26,040	15,864	13,404	6,943	151	556	201,319
II. Domestic . .	81,690	58,225	28,784	19,650	14,039	7,300	212	71	209,971
III. Commercial . .	138,744	108,011	43,092	32,911	21,784	10,247	184	36	355,009
IV. Transport and Communication . .	84,519	53,332	29,790	19,493	14,222	6,076	263	42	207,737
V. Industrial . .	284,668	234,245	85,373	63,547	32,526	22,550	445	205	723,559
VI. Primary Producers . .	208,710	147,438	109,549	52,584	48,979	29,863	1,257	315	598,695
VII. Independent	7,997	7,617	2,003	1,206	806	796	1	. .	20,426
Total Breadwinners	884,104	669,453	324,631	205,255	145,760	83,775	2,513	1,225	2,316,716
VIII. Dependents . .	1,206,252	856,379	428,460	287,621	184,390	128,847	1,231	1,343	3,094,523
Unspecified . .	10,015	5,448	2,881	2,284	2,582	1,158	123	4	24,495
Total . .	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

(ix) *Changes in Occupation,* 1871 to 1921. The following table shows the changes which have taken place in the occupations of the people in the 50 years from 1871 to 1921, and illustrates the relative decline in the number of breadwinners engaged in the primary industries and the corresponding expansion of the other industrial groups. The arrest of progress from the financial crisis of the nineties is also brought into striking relief. From the Census of 1871 the proportion engaged in the primary group fell, and that in the industrial group rose until at the Census of 1891 the two groups were practically equal. The Census of 1901, i.e., after the financial collapse, showed a reversion to the primary from the secondary industries. A feature of the movement of that time was the transfer of workers from the industries of the eastern States to the goldfields of Western Australia. The same cause was no doubt responsible for the increased proportion represented in 1901 by the domestic class, which, with this exception, has declined since 1881. The curve of the development of the industrial group during the twenty years 1901–1921 is somewhat similar to that during the period 1871 to 1891, but, whereas in 1891 the proportions represented by the industrial and primary groups were equal, in 1921 the industrial group represented 31.2 per cent. of all breadwinners, and the primary group 25.8 per cent. only.

Increased proportions in the professional, commercial, and transport classes evidence the higher standard of life and the increasing complexity of the social structure.

POPULATION.—OCCUPATIONS, AUSTRALIA, CENSUSES 1871 TO 1921.

Occupations.	1871.	1881.	1891.	1901.	1911.	1921.
I. Professional ..	35,534	50,495	84,887	112,356	146,608	203,273
II. Domestic ..	79,684	111,164	158,651	202,216	202,925	211,659
III. Commercial ..	56,131	83,918	167,653	224,028	291,366	358,724
IV. Transport and Communication	26,173	41,445	92,632	122,702	158,854	210,148
V. Industrial ..	182,615	269,140	419,445	429,012	569,132	731,359
VI. Primary Producers	303,044	349,344	419,499	535,766	608,843	605,426
VII. Independent ..	5,953	8,778	23,126	22,430	26,402	20,622
Total Breadwinners ..	689,134	914,284	1,365,893	1,648,510	2,004,130	2,341,211
VIII. Dependents ..	979,452	1,338,333	1,808,499	2,125,291	2,450,875	3,094,523
Total ..	1,668,586	2,252,617	3,174,392	3,773,801	4,455,005	5,435,734

NOTE.—In this table those cases for which no occupation was stated have been distributed proportionately over the various classes of breadwinners.

OCCUPATIONS.—PERCENTAGES OF EACH CLASS ON TOTAL BREADWINNERS, AUSTRALIA, CENSUSES 1871 TO 1921.

Occupations.	1871.	1881.	1891.	1901.	1911.	1921.
Professional	5.1	5.5	6.2	6.8	7.3	8.7
Domestic	11.6	12.2	11.6	12.2	10.1	9.1
Commercial	8.1	9.2	12.3	13.6	14.5	15.3
Transport and Communication ..	3.8	4.5	6.8	7.4	8.0	9.0
Industrial	26.5	29.4	30.7	26.1	28.4	31.2
Primary	44.0	38.2	30.7	32.5	30.4	25.8
Independent	0.9	1.0	1.7	1.4	1.3	0.9
Total Breadwinners ..	100.0	100.0	100.0	100.0	100.0	100.0

8. **Grade of Employment**—(i) *General.* The term " grade of employment " indicates the capacity in which persons are employed in the various branches of industry. The grades recorded are five in number, viz. :—(*a*) Employer, (*b*) Working on own account, (*c*) Assisting but not receiving wages or salary, (*d*) Receiving wages or salary, (*e*) Unemployed. In addition to these categories provision is made for (*f*) Grade not applicable —which consists mainly of dependents and persons of independent means not engaged in gainful occupations, and (*g*) Grade not stated.

(ii) *Employers and Workers on Own Account.* For all States the figures show a decline in the number of employers, and an increase in the number of those working on their own account. For Australia as a whole the number of employers fell from

212,583 in 1911 to 139,623 in 1921, or by 34.3 per cent., while the number working on their own account increased by nearly 93 per cent. from 177,114 in 1911, to 342,321 in 1921. From these results it would appear that many of the small employers of 1911 had dispensed with paid assistance in 1921. It is probable, also, that the establishment of returned soldiers in small businesses and other ventures increased the number of workers on their own account.

(iii) *Assisting, but not Receiving Wages.* The number of those assisting, but not receiving wages or salary—mainly sons, daughters, or other relatives of the principal—fell by 54.4 per cent., from 76,370 in 1911 to 34,792 in 1921.

(iv) *Wage Earners.* In considering the proportion of the wage and salary-earning division of the community, account must be taken of the persons returned as unemployed at the date of the Census, since, ordinarily, these persons are wage or salary earners. Combining the two grades, therefore, it appears that of the total population of Australia on the 4th April, 1921, the wage and salary earners represented 31 per cent. Excluding those persons to whom grade of employment is not applicable and those whose grade was not stated, about 74 per cent. of male breadwinners and 86 per cent. of the female breadwinners were wage or salary earners.

(v) *Unemployed.* The number returned as unemployed in 1921 was nearly three times as great as in 1911, this result being confirmed by figures collected in connexion with the Labour and Industrial Branch.

POPULATION.—GRADE OF EMPLOYMENT, AUSTRALIA, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Grade.	States.						Territories.		Australia
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
Employer ..	47,892	44,705	19,570	13,415	9,200	4,705	99	37	139,623
Working on own account ..	121,763	97,043	53,741	31,494	22,918	14,637	585	140	342,321
Assisting but not receiving wages or salary	10,966	11,733	5,729	2,922	1,498	1,929	10	5	34,792
Receiving wages or salary	586,253	433,425	195,606	136,170	95,679	53,517	1,414	829	1,502,893
Unemployed ..	61,640	40,008	33,348	10,580	9,071	4,063	345	25	159,080
Grade not applicable	1,258,132	895,730	444,604	208,038	191,385	133,492	1,329	1,533	3,224,243
Grade not stated ..	13,725	8,636	3,374	2,541	2,981	1,437	85	3	32,782
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

9. **Unemployment.**—(i) *Causes.* At the Census of the 4th April, 1921, there were in Australia 1,661,973 wage or salary earners, of whom 159,080 were unemployed. The following table gives the causes of unemployment so far as they were ascertained. Of the 159,080 returned as unemployed, 7,416, or 4.7 per cent., failed to state the cause. For the remainder, approximately 50 per cent. of the unemployment was due to scarcity of work, 29 per cent. to illness or accident, 3 per cent. to industrial disputes, 1.5 per cent. to old age, and 17 per cent. to other causes.

POPULATION.—CAUSES OF UNEMPLOYMENT, AUSTRALIA, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Particulars.	Scarcity of Employment.	Illness.	Accident.	Industrial Dispute.	Old Age.	Other Cause.	Cause not Stated.	Total.
Males ..	68,751	29,799	4,556	4,249	2,068	22,001	6,251	137,675
Females ..	6,092	9,551	246	290	71	3,990	1,165	21,405
Persons ..	74,843	39,350	4,802	4,539	2,139	25,991	7,416	159,080

(ii) *Duration.* At the Census of 1921 persons who were unemployed on Saturday, 2nd April, 1921, were asked to state the number of working days during which they had been out of work, but 24,148, or 15.2 per cent., of those concerned failed to comply with the request. The results of the enquiry are summarized in the following table. Of the 134,932 cases for which the duration was stated, approximately 46 per cent. were unemployed under five weeks, 17.2 per cent. from five to ten weeks, 10.6 per cent. from ten to fifteen weeks, and 26.2 per cent. above fifteen weeks :—

POPULATION.—DURATION OF UNEMPLOYMENT, AUSTRALIA, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Duration of Unemployment in Working Days.	4th April, 1921.			Duration of Unemployment in Working Days.	4th April, 1921.		
	Males.	Females.	Persons.		Males.	Females.	Persons.
Under 10 ..	22,029	3,419	25,448	70–79 ..	4,181	673	4,854
10–19 ..	18,910	2,870	21,780	80–89 ..	2,405	341	2,746
20–29 ..	12,787	1,983	14,770	90 and over	30,901	4,513	35,414
30–39 ..	10,173	1,591	11,764	Not stated ..	20,671	3,477	24,148
40–49 ..	6,103	997	7,100				
50–59 ..	3,759	624	4,383				
60–69 ..	5,756	917	6,673	Total ..	137,675	21,405	159,080

(iii) *Unemployment in States.* Particulars regarding unemployment in the separate States at the time of the Census may be found in Part XVII. (Occupations) of the tables relating to the Census of 1921.

§ 9. Dwellings.

[NOTE.—Information concerning dwellings will be found in detail in Census Parts Nos. XVIII.—XXV.]

1. **General.**—The following table represents a summary of the information relating to dwellings which was obtained at the Census of 1921. Including those in course of construction there were in Australia on the 4th April, 1921, 1,210,790 dwellings—including hotels, boarding-houses, hospitals, gaols and any structure for the purpose of shelter as a dwelling, but excluding wagons used as camps, and dwellings occupied solely by full-blood aboriginals. The number of dwellings per square mile varies from 1 to every 433 square miles in the Northern Territory to 1.87 (approximately one dwelling to every half a square mile) in Tasmania, the average throughout Australia being 0.41. Of the total dwellings referred to above, 51,166 were stated to be unoccupied. This description does not, however, mean all dwellings so returned were " to let " but, merely, that they had no inmates on the night of the census. The average number of rooms per occupied dwelling ranged from 5.33 in Victoria to 4.59 in Western Australia, the average for Australia being 4.96 as compared with 5.18 in 1911. The number of persons per occupied dwelling varied from 4.85 in New South Wales to 4.52 in Western Australia, the average for Australia being 4.71, as compared with 4.82 in 1911. For Australia as a whole, there were 0.95 persons per room in 1921, as against 0.93 persons in 1911.

2. **Occupied Private Dwellings.**—A better index to the housing conditions of the people is obtained by excluding all other than occupied *private* dwellings. The following table shows that of the 1,153,285 occupied dwellings in Australia, 1,107,010 were private dwellings. These contained an average of 4.94 rooms in 1921, as compared with 4.93 in

1911, and had an average of 4.40 inmates, as against 4.53 in 1911. The number of inmates per room in occupied private dwellings in Australia declined from 0.92 in 1911 to 0.89 in 1921.

3. **Private Dwellings occupied by Tenants.**—For Australia as a whole the proportion of private dwellings which were occupied by tenants dropped from 47.78 per cent. in 1911 to 43.67 in 1921. The falling off was due mainly to the increase in the number of dwellings occupied by rent purchasers resultant on the policies of the State Governments of advancing money for the building of homes, and on the activities of the War Service Homes Commissioners.

DWELLINGS.—AUSTRALIA, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Particulars of Dwellings.	States.						Territories.		Australia
	New South Wales.	Victoria.	Q'land.	South Aust.	West. Aust.	Tasmania.	Northern.	Fed. Cap.	
All Dwellings									
Occupied(*a*) ..	432,976	331,290	160,139	107,914	73,548	45,818	1,074	526	1,153,285
Unoccupied ..	18,619	14,994	6,747	4,431	3,274	2,934	135	29	51,163
Being Built ..	2,724	2,009	347	674	289	295	..	..	6,338
Total Dwellings ..	454,319	348,293	167,233	113,019	77,111	49,047	1,209	555	1,210,786
Number of Dwellings per square mile ..	1.47	3.96	0.25	0.30	0.08	1.87	.002	0.59	0.41
Rooms per Occupied Dwelling ..	5.23	5.33	5.31	5.09	4.59	4.70	2.80	5.29	4.96
Population per Occupied Dwelling..	4.85	4.62	4.72	4.59	4.52	4.67	3.60	4.89	4.71
Occupied *Private* Dwellings ..	414,468	318,936	153,313	104,295	70,185	44,432	1,005	376	1,107,010
Rooms per Dwelling	4.97	5.11	4.94	4.90	4.22	4.80	2.70	4.85	4.94
Inmates per Dwelling	4.52	4.34	4.40	4.34	4.11	4.44	2.83	4.39	4.40
Inmates per Room	0.91	0.85	0.89	0.89	0.97	0.93	1.05	0.91	0.89
Percentage occupied by Tenants ..	49.72	42.46	33.59	40.67	36.95	47.30	25.31	65.18	43.67
Weekly Rental Value (*b*)	18s. 2d.	16s. 11d.	13s. 6d.	14s. 7d.	13s. 11d.	11s. 10d.	13s. 5d.	9s. 0d.	16s. 6d.

(*a*) Excluding Wagons and Camps. (*b*) Average weekly rental value of private dwellings *occupied by tenants.*

4. **Private Dwellings in Urban and Rural Divisions.**—(i) *General.* The following table, which relates to *occupied private dwellings* in the Urban and Rural Divisions of Australia, shows that, while the average number of rooms and the average number of inmates per occupied private dwelling are greater in the Metropolitan Area than in the Urban Provincial or Rural Districts, the average number of inmates per room is least in the Metropolitan Districts.

(ii) *Tenants.* The proportion of occupied private dwellings occupied by tenants is greatest in the Metropolitan Areas, where it represents 53.17 per cent. of all dwellings for which the mode of occupancy was stated, as against 46.05 per cent. in the Urban Provincial Districts, and 31.02 per cent. in the Rural Districts. In urban districts, however, the dwelling is as a rule valued as a purely residential entity, whereas in rural districts the productive property of the land—to which the dwelling is an appurtenance—is most often the incentive to ownership.

(iii) *Rental Value.* Considerable divergence was shown between the Metropolitan and other divisions of the country in the weekly rental value of private dwellings, which vary from an average of 9s. 11d. in the Rural Districts to 20s. 8d. in the Metropolitan Areas.

OCCUPIED PRIVATE DWELLINGS.—URBAN AND RURAL, AUSTRALIA, CENSUS, 4th APRIL, 1921.

Particulars.	Urban.		Rural.	Total.
	Metropolitan.	Provincial.		
Occupied Private Dwellings	467,913	207,807	431,290	1,107,010
Rooms per Dwelling	5.15	5.07	4.66	4.94
Inmates per Dwelling	4.42	4.40	4.39	4.40
Inmates per Room	0.86	0.87	0.95	0.89
Percentage occupied by Tenants ..	53.17	46.05	31.02	43.67
Weekly Rental Value(*a*)	20s. 8d.	14s. 0d.	9s. 11d.	16s. 6d.

(*a*) Average weekly rental value of private dwellings occupied by tenants.

5. **Private Dwellings in Metropolitan Areas.**—(i) *General.* The number of rooms per dwelling in these areas varied from a minimum of 4.67 in Perth to a maximum of 5.47 in Brisbane—a difference of 17 per cent., but the number of inmates per dwelling varied from 4.31 in Adelaide to 4.52 in Sydney—a difference of 5 per cent. only. The average number of inmates per room was highest in Perth, with 95 persons to every 100 rooms, and lowest in Brisbane, where there were 81 persons to every 100 rooms.

(ii) *Tenants.* The proportion of private dwellings in Metropolitan Areas occupied by tenants ranged from 39.18 per cent. in Brisbane to 59.22 per cent. in Sydney, the average for the six capitals being 53.17 per cent., as against 63.48 per cent. in 1911. As already mentioned, the decline during the decade 1911–1921 in the proportion of tenants was due largely to the action of the State Government and of the War Service Homes Commissioners in facilitating the acquirement of houses under the system of purchase by instalment.

(iii) *Rental Value.* The weekly rent of private dwellings ranged from 17s. 1d. per week in Hobart to 23s. per week in Sydney.

OCCUPIED PRIVATE DWELLINGS IN METROPOLITAN AREAS.—CENSUS, 4th APRIL, 1921.

Particulars of Dwellings.	Sydney and Suburbs.	Melbourne and Suburbs.	Brisbane and Suburbs.	Adelaide and Suburbs.	Perth and Suburbs.	Hobart and Suburbs.	Total.
Occupied Private Dwellings ..	173,322	158,001	42,378	53,741	29,741	10,730	467,913
Rooms per Dwelling	5.14	5.19	5.47	5.06	4.67	5.10	5.15
Inmates per Dwelling ..	4.52	4.34	4.44	4.31	4.43	4.35	4.42
Inmates per Room	0.88	0.84	0.81	0.85	0.95	0.85	0.86
Percentage occupied by Tenants	59.22	54.14	39.18	46.64	43.57	55.02	53.17
Weekly Rental Value(*a*) ..	23s. 0d.	20s. 0d.	17s. 2d.	17s. 9d.	17s. 8d.	17s. 1d.	20s. 8d.
Weekly Rental Value per Room	4s. 6d.	3s. 10d.	3s. 2d.	3s. 6d.	3s. 10d.	3s. 5d.	4s. 0d.

(*a*) Average weekly rental value of private dwellings occupied by tenants.

§ 10. Immigration.

(A) The Encouragement of Immigration into Australia.

1. **General.**—Various measures have from time to time been adopted by the Commonwealth and State Governments, as well as by private societies and individuals, to promote the immigration of suitable settlers into Australia. The activities of the Commonwealth Government (which is vested with constitutional powers in regard to immigration under section 51, xxvii., of the Constitution Act 1900) with respect to the encouragement of immigration, were formerly confined to advertising the resources and attractions of Australia by means of exhibitions, and in handbooks, in newspapers, and periodicals. During the war, immigration operations were almost entirely suspended.

2. **Joint Commonwealth and States' Immigration Scheme.**—In 1920 an arrangement was arrived at between the Commonwealth and State Governments under which the Commonwealth is responsible for the recruiting of immigrants abroad and for their transport to Australia, whilst the State Governments advise the Commonwealth as to the numbers and classes of immigrants which they are prepared to receive. Briefly stated, the Commonwealth selects the immigrant according to the requirements of the State concerned and brings him to Australia, and on his arrival the State Government assumes the responsibility for placing him in employment or upon the land. Incidentally, the Commonwealth undertakes all publicity and propaganda in connexion with the encouragement of immigration.

3. **Assisted Passages.**—During the period 1st May, 1925, to 31st March, 1928, the British and Commonwealth Governments will jointly donate the following contributions towards the passages of approved settlers for Australia from the United Kingdom :—Children under 12 years, £16 10s. (representing the whole of the half fare) ; juveniles 12 and under 17 years, £27 10s. ; juveniles 17 years and under 19 years, £22 ; married couples, including widowers or widows, and wives nominated by husbands, with at least, one child under 19 years, £22 per parent (children at rate according to age) ; others including children 19 years of age and over, £16 10s. Allowing for this financial assistance, children under 12 years will be carried free ; juveniles 12 years of age and under 17 years, who are ordinarily charged for by the shipping companies as adult passengers, will merely require to pay £5 10s. each ; juveniles 17 years and under 19 years, £11 each : married couples, including widowers or widows, and wives nominated by husbands, with at least one child under 19 years, £11 per parent (children at rate according to age) ; others. including children 19 years and over, £16 10s. each. Persons who have previously resided in the Commonwealth are not eligible for assistance. In addition to these contributions, loans of the balance of the passage money are in special cases granted by the Governments concerned. Persons entitled to assisted passages are divided into two classes—" Selected " and " Nominated." " Selected " immigrants are those such as farm workers and domestics who are originally recruited abroad by the Commonwealth Government. " Nominated " immigrants are those nominated by persons resident in Australia, and the nominators, who must submit their applications through the officers in charge of the State Immigration Offices in the various capital cities, are held responsible for their nominees upon arrival, so that they shall not become a burden upon the State.

Intending settlers or immigrants may, on application, obtain full information from the Director of Migration and Settlement, Australia House, Strand, London, W.C.2. ; or from the Deputy Director, Commonwealth Immigration Office, V.C.A. Buildings, corner of Flinders-street and Collins-place, Melbourne.

4. **New Migration Agreement between British and Commonwealth Governments.**—On the 8th April, 1925, the British and Commonwealth Governments entered into an agreement under which it is proposed to make available to the Governments of the various States, loan moneys at a very low rate of interest, to enable suitable areas of land to be made available for settlement, or to enable such public works to be carried out as will

tend to develop and expand the settlement areas and to increase the capacity of already settled areas to carry a greater population. The maximum amount of loan moneys provided for in the agreement is £34,000,000. It is provided that for every principal sum of £75 issued to a State Government under the agreement, one assisted migrant shall sail direct from the United Kingdom and be received into and satisfactorily settled in the State concerned. If full advantage is taken of the offer of loan moneys contained in the agreement, 450,000 new settlers must be absorbed over a period of ten years.

5. **Results of Assisted Immigration.**—In the earlier days of settlement in Australia, State-assisted immigration played an important part. Such assistance ceased for the time being in Victoria in 1873, in South Australia in 1886, and in Tasmania in 1891. In New South Wales, general State-aided immigration was discontinued in the year 1887, but those who arrived under that system and were still residing in New South Wales, might, under special regulations, send for their wives and families. A certain amount of passage money, graduated according to the age of the immigrant, had to be paid in each case. Under the provisions of these regulations, immigrants to the number of 1,994 received State assistance during the years 1888 to 1899 inclusive. From 1900 to 1905 no assistance of any kind was given, but from 1906 onwards assistance has again been granted. In Queensland and Western Australia, such assistance, although varying considerably in volume from year to year, has been accorded for many years past. Assistance to immigrants, which in the case of Victoria had practically ceased in 1873, has recently been again afforded. In South Australia the principle of State assistance was again introduced in 1911, and in Tasmania in 1912.

The number of assisted immigrants for the years 1914 to 1925 and the total from the earliest years up to the end of 1925 are given in the following table :—

ASSISTED IMMIGRATION.—1914 TO 1925, AND UP TO THE END OF 1925.

Persons.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
No. Assisted during 1914	6,655	7,496	4,096	644	1,729	185	20,805
,, ,, ,, 1915	1,695	1,724	1,599	79	635	64	5,796
,, ,, ,, 1916	649	327	300	..	103	18	1,397
,, ,, ,, 1917	239	146	91	..	26	2	504
,, ,, ,, 1918	199	101	100	..	26	..	426
,, ,, ,, 1919	67	139	39	..	..	..	245
,, ,, ,, 1920	3,211	2,763	1,272	..	1,499	314	9,059
,, ,, ,, 1921	4,980	3,987	1,147	572	3,381	615	14,682
,, ,, ,, 1922	7,087	9,145	1,711	1,531	4,373	411	24,258
,, ,, ,, 1923	5,005	9,504	2,377	1,711	7,654	394	26,645
,, ,, ,, 1924	6,211	8,721	1,788	1,375	6,715	226	25,036
,, ,, ,, 1925	8,788	8,589	2,318	1,292	3,701	139	24,827
Total from earliest years to end of 1925 ..	307,283	229,603	224,799	109,188	69,144	24,282	964,299

(B) The Regulation of Immigration into Australia.

1. **Pre-Federal Restrictions.**—(i) *Alien Races.* For many years prior to federation the States had imposed certain restrictions upon the admission of persons desirous of becoming permanent residents. The influx of Chinese, for example, was limited by stringent statutes, and later, general Acts were passed in some of the States which restricted the immigration of other—principally Asiatic—races.

(ii) *Undesirable Immigrants.* Further restrictions were placed upon the admission of persons who were undesirable as inhabitants, either for medical or moral reasons, or who were likely to become an economic burden upon the community.

2. Powers and Legislation of the Commonwealth.—(i) *Constitutional.* Under Part V., Sec. 51, xxvii. and xxviii. of the Commonwealth Constitution Act the Parliament of the Commonwealth is empowered to make laws with respect to immigration and emigration and the influx of criminals. (See page 24 hereinbefore.)

(ii) *Legislation.* The powers above specified have been exercised by the Commonwealth Government, and the laws passed in pursuance thereof supersede the previously existing State laws. The present Commonwealth Acts dealing with Immigration are the Immigration Act 1901–1925 and the Contract Immigrants Act 1905. A summary of the provisions of these Acts (excepting the provisions of the Amending Immigration Acts of 1920, 1924 and 1925, which are given below), containing particulars regarding the admission of immigrants, prohibited immigrants, the liabilities of shipmasters and others, and kindred matters will be found in preceding Year Books (see Year Book, No. 12, pp. 1166 to 1168).

3. Amending Immigration Act 1920.—The principal provisions of this Act, which came into operation as from the 2nd December, 1920, are those prohibiting the entry of (*a*) any person who advocates the overthrow by force or violence of the established Government of the Commonwealth or of any State or of any other civilized country, or of all forms of law, etc.; (*b*) for a period of five years, and thereafter until the Governor-General by proclamation otherwise determines, any person of German, Austro-German, Bulgarian, or Hungarian parentage and nationality, or Turk of Ottoman race; (*c*) any person over 16 years of age who, on demand by an officer, fails to prove that he is the holder of a valid passport; (*d*) any person who has been deported under any Act.

Section 9 of the War Precautions Act Repeal Act also provides for prohibiting the entry of any British subject who upon being required to make and subscribe an oath or affirmation of loyalty fails to do so.

4. Amending Immigration Act 1924.—The provisions of this Act were mainly intended to improve the machinery of the existing law. Section 3, paragraph (*f*), of the principal Act was amended to include amongst the classes of prohibited immigrants any persons who in the opinion of an officer were considered likely to become a charge upon the public through having insufficient means of support or from any other cause. It is now required that every alien immigrant must be in possession of at least £40 landing money, unless his maintenance has been guaranteed by some one residing in Australia.

5. Amending Immigration Act 1925.—This measure contains several important amendments, the principal of which are those providing power—(i) To prohibit the entry of any person declared by the Minister to be in his opinion, from information received from the Government of the United Kingdom or of any other part of the British Dominions or from any foreign Government, through official or diplomatic channels, undesirable as an inhabitant of, or visitor to, the Commonwealth. (ii) To prohibit by proclamation, either wholly or in excess of specified numerical limits, and either permanently or for a specified period, the immigration into the Commonwealth, or the landing at any specified port or place in the Commonwealth, of aliens of any specified nationality, race, class or occupation, in any case where it is deemed desirable so to do—(*a*) on account of the economic, industrial, or other conditions existing in the Commonwealth; (*b*) because the persons specified in the proclamation are deemed to be unsuitable for admission into the Commonwealth; or (*c*) because they are deemed unlikely to become readily assimilated or to assume the duties and responsibilities of Australian citizenship within a reasonable time after their entry. (iii) To deport persons, other than those born in Australia, who have been concerned in Australia in acts directed towards hindering or obstructing, to the prejudice of the public, the transport or the conveyance of passengers, or the provision of necessary services, and whose presence in Australia is considered likely to be injurious to the peace, order, and good government of the Commonwealth. Before action can be taken under the latter provision to deport any person from the Commonwealth, he must be required to appear before a specially appointed Board, to afford him an opportunity to show cause why he should not be deported. The Board will consist of three members nominated by the Minister, and the Chairman must be a person who holds or has held the office of Judge, or of Police, Stipendiary, or Special Magistrate.

6. **Compilation of Statistics.**—The statistics relative to immigration, which are presented in this Chapter, have been compiled by the Department of Home and Territories in accordance with the provisions of the Immigration Act 1901–25. The number of persons admitted without test includes Australian citizens who have been abroad, and other persons landing in Australia irrespective of the length of time which they propose to stay. Certain persons who are permitted to land (under security for their subsequent departure) pending transhipment to another country are not included. The majority of the persons of Asiatic or other non-European nationality shown in the table are former residents of Australia who have returned from visits abroad, or are persons who have been admitted temporarily under exemption certificates, for business, educational, or other purposes. The Immigration Act 1901–25 does not require any statistical record of the departures from Australia.

It may be mentioned, however, in this connexion, that the Bureau of Census and Statistics, for the purpose of estimating the population of Australia, compiles—from data collected by the Department of Trade and Customs—statistics of both arrivals into and departures from Australia. For this compilation, all persons leaving an oversea ship, and all persons joining an oversea ship, in any Australian port, are counted. Consequently the number of arrivals as recorded respectively under the Immigration Act and by this Bureau are not in complete agreement. During the last five years the number of persons who desired but were not permitted to land was 29 in 1921; 18 in 1922; 49 in 1923; 50 in 1924; and 35 in 1925.

7. **Persons Admitted Without Dictation Test.**—The following table shows the number and nationality of persons admitted during the years 1921 to 1925 without passing the dictation test:—

PERSONS ADMITTED WITHOUT DICTATION TEST.—NATIONALITIES, AUSTRALIA, 1921 TO 1925.

Nationality.	1921.	1922.	1923.	1924.	1925.
EUROPEANS—					
Austrians	(a)5	(a)8	(a)2	9	28
Belgians	73	72	84	69	112
British	76,518	84,263	85,440	88,335	82,662
Danes	201	179	172	189	150
Dutch	321	233	219	248	183
French	529	525	378	660	577
Germans	(a)76	(a)86	(a)130	195	288
Greeks	258	472	922	2,028	645
Italians	1,278	3,367	1,739	4,540	6,102
Maltese	132	373	323	418	401
Norwegians and Swedes	487	361	491	383	172
Poles	51	45	58	111	178
Portuguese	8	2	4	..	..
Rumanians	9	14	14	23	21
Russians	100	116	256	312	515
Spaniards	83	51	85	108	103
Swiss	149	169	160	277	258
Turks	..	4	2	..	..
Other Europeans ..	344	(b)339	(c)587	(d)2,735	(e)1,397
AMERICANS—					
North Americans ..	1,577	1,372	1,470	1,400	1,479
South Americans ..	35	14	13	27	..
American Indians ..	..	..	..	..	..
Negroes	6	5	13	11	9
West Indians	7	3	6	2	3

(a) Landed on exemption certificates or under special authority. (b) Including 110 Finns and 125 Jugo-Slavs. (c) Including 154 Finns and 240 Jugo-Slavs. (d) Including 374 Finns and 1,933 Jugo-Slavs. (e) Including 149 Finns and 950 Jugo-Slavs.

PERSONS ADMITTED WITHOUT DICTATION TEST.—NATIONALITIES, AUSTRALIA, 1921 TO 1925—*continued.*

Nationality.	1921.	1922.	1923.	1924.	1925.
ASIATICS—					
Arabs	4	5	3	16	7
Chinese	1,833	1,964	1,974	1,917	1,256
Filipinos	13	10	25	15	22
Japanese	282	390	222	240	440
Javanese	6	8	4	1	12
Malays	44	39	29	23	69
Natives of India and Ceylon	182	225	141	174	186
Palestinian	(*a*)	(*a*)	(*a*)	(*a*)	87
Syrians	39	79	147	288	172
Timorese	34	371	243	316	287
OTHER RACES—					
Maoris	..	..	..	..	..
Mauritians	..	..	..	..	..
Pacific Islanders ..	46	47	43	50	36
Papuans	170	368	282	365	383
Unspecified	44	39	44	86	39
Total	84,944	95,618	95,725	105,571	98,279

(*a*) Not previously recorded.

8. **Departures of Persons of Non-European Races.**—The following table shows the number of persons of non-European races who left Australia during the years 1921 to 1925:—

DEPARTURES OF PERSONS OF NON-EUROPEAN RACES—AUSTRALIA, 1921 TO 1925.

Nationality.	1921.	1922.	1923.	1924.	1925.
American Negroes ..	7	4	4	7	11
West Indians	2	2	7	1	..
Afghans	..	..	1	2	6
Arabs	4	6	3	4	9
Chinese	2,912	2,189	2,310	1,898	1,732
Filipinos	19	25	23	14	15
Japanese	626	359	436	366	336
Javanese	8	4	2	3	7
Malays	209	79	92	43	32
Natives of India and Ceylon	358	199	167	156	246
Pacific Islanders	43	46	38	57	35
Papuans	82	146	359	282	382
Others	330	154	214	488	31
Total	4,600	3,213	3,656	3,321	2,842

(C) Passports.

Provision is made in the Immigration Act 1920 for the production of passports by all persons over 16 years of age who desire to enter Australia. Similarly, the Passports Act 1920 provides that no person over the age of 16 years shall leave Australia unless—

(*a*) he is the holder of a passport or other document authorizing his departure; and
(*b*) his passport has been viséed or indorsed in the prescribed manner for that journey, and the visé or indorsement has not been cancelled.

Among the exceptions to this requirement are natural-born British subjects leaving for New Zealand, Papua, or Norfolk Island ; members of the crew of any vessel who sign on in Australia for an oversea voyage and who satisfy an authorized officer that they are by occupation seafaring men ; aboriginal natives of Asia, or of any island in the East Indies, or in the Indian or Pacific Oceans. The charge for a Commonwealth passport is 10s., and for a visé 2s.

With regard to (*b*), the Commonwealth Government has agreed to the inclusion of Australia in reciprocal arrangements for the abolition of visé requirements made by the British Government with the respective Governments of the following countries, viz. :—France, Switzerland, Italy, Belgium, Denmark, Sweden, and Norway.

§ 11. Naturalization.

1. **Commonwealth Legislation.**—A brief summary of the Commonwealth legislation regarding naturalization is given in Year Book No. 15 (p. 1090).

The "Nationality Act 1920" was amended by the "Nationality Act 1922," which extends the operation of the principal Act to the Territories of Papua and Norfolk Island, and to any other territories under the authority of the Commonwealth to which the Governor-General by proclamation declares it to extend. A further amendment made by the Nationality Act 1925. the object of which was to bring the Nationality Act into line with the British law and to meet the wishes of British communities in foreign countries, restores the privilege of British nationality to children of the second generation, and also under certain conditions to children of later generations. A penal clause was also inserted dealing with trafficking in naturalization certificates.

The grant of a certificate of naturalization entitles the recipient to all the rights and privileges, and renders him subject to all the obligations of a natural-born British subject, with the exception that where, by any Commonwealth or State Constitution or Act, a distinction is made between natural-born British subjects and naturalized persons, such distinction shall hold good in the case of all persons naturalized under the Commonwealth Act.

The "Nationality Act 1920" provides that applications for certificates of naturalization must be made to the Governor-General, the qualifications required in an applicant being :—(i) Residence in Australia or a Territory continuously for not less than one year immediately preceding his application for naturalization, and previous residence, either in Australia or in some other part of His Majesty's dominions, for a period of four years within the last eight years before the application ; (ii) Good character and an adequate knowledge of the English language : (iii) Intention to settle in the British Empire.

The applicant is required to furnish the following particulars in support of his application :—His own statutory declaration stating—(*a*) Name ; (*b*) Age ; (*c*) Birthplace ; (*d*) Occupation ; (*e*) Residence ; (*f*) Length of residence in the British Empire ; (*g*) Intention to settle in the British Empire ; (*h*) Such other particulars as are prescribed. He must also furnish—(*a*) Newspapers containing copies of an advertisement, as prescribed, of his intention to seek naturalization ; (*b*) Certificates of character from three natural-born British subjects, two of whom must be householders, and the third a Justice of the Peace, Postmaster, State School Teacher, or Police Officer ; (*c*) Satisfactory evidence that he has an adequate knowledge of the English language.

The Governor-General in Council may, in his absolute discretion, and with or without assigning any reason, grant or withhold a certificate of naturalization as he thinks most conducive to the public good ; but the issue of a certificate of naturalization will not be effected until the applicant furnishes a certificate signed by a Justice of the High Court of Australia, a State Judge, or a Magistrate, certifying that he has renounced allegiance to the country of which he was a subject at the time of his application for naturalization, and that he has taken an oath or affirmation of allegiance to the Crown in accordance with the Constitution. The grant of a certificate is made free of charge.

In addition to naturalization by grant of certificate, the act makes provision for—(*a*) Naturalization by marriage; (*b*) Naturalization by inclusion in certificate granted to parent.

The former relates to the case of a woman who is not herself a British subject, but is married to a British subject; the latter to that of a person who is not a natural-born British subject, but who being under 21 years of age has, at the request of the parent, been included in the certificate granted to him by the Commonwealth. In each instance the person concerned is deemed to be naturalized under the Commonwealth Act.

The Governor-General may revoke a certificate of naturalization on any one of a number of grounds set out in Section 12 of the Nationality Act 1920–22, and the grantee thereupon ceases to be a British subject and is regarded as a subject of the State to which he belonged at the date of issue of the certificate of naturalization.

Where a wife and any minor children have acquired British nationality under the certificate issued to the husband and father, and such certificate is subsequently revoked, the wife and children remain British subjects unless the Governor-General otherwise declares, or unless they themselves elect to make a declaration of alienage.

In accordance with the Act, a list of persons naturalized, with their addresses, is published in the *Commonwealth Gazette* from time to time.

The administration of the Act is carried out by the Home and Territories Department, and the Governor-General is authorized to make such regulations as are necessary or convenient for giving effect to the Act.

2. **Certificates Granted.**—(i) *Australia.* Particulars regarding the previous nationalities of the recipients of certificates of naturalization issued under the Act during each of the five years 1921 to 1925, and the countries from which such recipients had come, are given in the following table :—

NATURALIZATION.—COMMONWEALTH CERTIFICATES GRANTED, 1921 TO 1925.

Previous Nationalities of Recipients.	No. of Certificates Granted.					Countries from which Recipients of Commonwealth Certificates had come.	No. of Certificates Granted.				
	1921.	1922.	1923.	1924.	1925.		1921.	1922.	1923.	1924.	1925.
Italian ..	182	200	138	177	154	Great Britain ..	245	201	128	122	108
Swedish ..	48	47	27	37	29	Italy ..	179	188	136	163	142
Danish ..	57	53	42	44	36	Germany ..	342	293	155	151	104
Russian ..	126	139	82	60	68	America (North)	87	88	55	44	45
German ..	459	376	196	176	134	Sweden ..	22	15	7	15	17
Norwegian ..	38	38	31	30	17	Denmark ..	26	22	9	21	16
Greek ..	140	138	141	173	172	Norway ..	14	20	16	12	13
American (North)	29	23	17	22	19	Greece ..	82	106	85	131	131
Dutch ..	14	18	15	22	16	France ..	40	24	16	25	11
Swiss ..	16	22	13	15	10	Egypt ..	66	41	47	31	26
French ..	41	28	19	33	28	America (South)	..	..	16	14	8
Spanish ..	17	16	26	22	17	Holland ..	..	11	6	9	8
Belgian ..	5	4	3	3	4	Russia ..	56	73	43	35	30
Rumanian ..	7	7	4	5	3	South Africa ..	25	13	9	13	15
Portuguese ..	1	2	2	1	..	Belgium ..	31	32	17	2	6
American (South)	1	..	1	..	1	New Zealand ..	23	16	17	17	12
Austrian ..	29	20	14	3	8	Switzerland ..	10	9	7	11	6
Mexican ..	..	..	..	..	..	Spain ..	8	14	19	12	16
Chinese ..	2	..	..	1	..	New Caledonia ..	..	..	..	..	5
Serbian ..	2	3	2	3	1	Argentine ..	..	..	..	..	2
Syrian ..	96	64	33	31	30	Canada ..	..	..	6	5	6
Polish ..	52	45	19	24	22	Finland ..	..	4	2	10	15
Finnish ..	34	21	18	16	27	Other Countries	255	183	124	121	126
Others ..	115	89	77	66	72						
Total ..	1,511	1,353	920	964	868	Total ..	1,511	1,353	920	964	868

(ii) *States.* The following table furnishes particulars concerning the States in which the recipients of Commonwealth certificates of naturalization during the years 1921 to 1925 were resident :—

NATURALIZATION.—COMMONWEALTH CERTIFICATES GRANTED IN EACH STATE, ETC., 1921 TO 1925.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Australia.
1921 ..	461	309	427	165	135	12	2	1,511
1922 ..	409	199	381	116	228	17	3	1,353
1923 ..	272	145	290	63	145	3	2	920
1924 ..	280	163	254	75	176	10	6	964
1925 ..	294	156	180	60	172	3	3	868

3. **Census Particulars.**—On the Personal Card used at the Census of 4th April, 1921, an inquiry as to naturalization was made, all persons who were British subjects by naturalization being required to indicate the fact by inserting the letter N in the place provided for the purpose on the card. In addition, in checking the cards in the Census Bureau, instructions were given that cases of women naturalized by marriage to British subjects, and of children naturalized by residence with parents who have become British subjects, should be duly taken into account by the insertion of the letter N if originally omitted. The results of the tabulation will be found in the following table :—

NATURALIZATION.—NATURALIZED BRITISH SUBJECTS, CENSUS OF 4th APRIL, 1921.

Particulars.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
Males ..	9,300	6,357	9,654	3,098	2,751	568	57	14	31,799
Females ..	3,249	2,434	5,764	1,411	856	223	6	3	13,946
Persons ..	12,549	8,791	15,418	4,509	3,607	791	63	17	45,745

§ 12. Population of Territories.

At the Census of the 4th April, 1921, special arrangements were made to obtain complete and uniform information concerning each of the five Territories of the Commonwealth, viz. :—(1) Northern Territory; (2) Federal Capital Territory; (3) Norfolk Island; (4) Papua; (5) Territory of New Guinea.

The work of Census enumeration in each Territory was carried out under the direction of the Commonwealth Supervisor of Census, the local organization in each Territory being under the control of a Deputy Supervisor of Census stationed in each Territory. On the conclusion of the collection the whole of the material was forwarded to the Census Office, Melbourne, for tabulation in conjunction with the data for Australia. A summary of the population and number of dwellings in each Territory is shown in the following table :—

POPULATION AND DWELLINGS.—TERRITORIES, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS IN THE NORTHERN AND FEDERAL CAPITAL TERRITORIES AND OF THE INDIGENOUS POPULATION OF PAPUA AND NEW GUINEA).

Territory.	Population.			Dwellings.			Total.
	Males.	Females.	Persons.	Occupied.	Unoccupied.	Being Built.	
Northern Territory ..	2,821	1,046	3,867	1,074	138	1	1,213
Federal Capital Territory ..	1,567	1,005	2,572	526	29	..	555
Norfolk Island	339	378	717	168	22	3	193
Papua	1,408	670	2,078	672	43	4	719
Territory of New Guinea ..	2,502	671	3,173	1,056	18	..	1,074

§ 13. The Aboriginal Population.

In Official Year Book No. 17, pp. 951 to 961, a brief account was given of the Australian aboriginal population, its origin, its numbers as estimated from time to time, and the steps taken for its protection. Pages 879 and 880 of this issue contain a statement showing the numbers of full-blood and half-caste aboriginals in each of the States and Territories of Australia at successive periods.

§ 14. The Chinese in Australia.

In Official Year Book No. 18, pp. 951 to 956, a brief historical sketch was given regarding "The Chinese in Australia," but limitations of space preclude its repetition in the present volume.

§ 15. The Pacific Islanders in Australia.

1. **General.**—The difficulty of obtaining workmen after the abolition of transportation to New South Wales in the year 1840, was responsible for the introduction into Australia not only of the first Chinese, but of the first Pacific Islanders. In 1842 Benjamin Boyd introduced some natives from the New Hebrides to work on his property at Boyd Town, near Table Bay. Encouraged by his success, other pastoralists, especially in the Riverina district, also tried the experiment of introducing Melanesian labour, Boyd fitting out vessels to supply the demand. There is no record of the number of islanders brought to New South Wales, but it was sufficiently large for the experiment to be watched with interest, and in some quarters with misgiving. In 1847 complaints were made by the British Consul in Fiji of violence committed by the crews of two of Boyd's vessels while endeavouring to obtain native labour, and steps were taken by the authorities to protect the islanders. This first experiment with black labour, however, proved a failure. Many of the islanders died, some because the climate was unsuitable, others through homesickness and loneliness. Most of the survivors deserted, and as they could not legally be brought back, importation gradually came to an end.

2. **Queensland.**—(i) *General.* The first Kanakas—by which name the islanders brought to Australia became known—arrived in 1863, when a Sydney merchant and shipowner, Captain Towns, introduced 67 natives to engage in cotton growing. Towns, who wished to demonstrate that cotton—for the production of which the colony offered a bonus—could be profitably grown in Queensland, obtained a tract of land not far from Brisbane for an experimental plantation, and, while for various reasons the industry made little progress, the islanders proved well suited for the work.

In 1864 the Hon. Louis J. Hope obtained 54 islanders for employment in sugar growing. The success of his experiment encouraged others to undertake the same work, and soon pioneers commenced pushing northward. Accordingly, shiploads of Kanakas, who at first had been brought to Moreton Bay only, were landed at Bowen and other ports convenient to the settlers, while agents took up the business of procuring recruits.

It was with the assistance of these labourers that the sugar industry, which has since become so important, was established, and, aided by the increasing numbers of recruits it greatly expanded as years went by. At first the islanders were obtained from the New Hebrides, but as this group could not continue to supply the growing demand, the recruiting agents extended their activities to the Solomon Islands and afterwards to the New Britain Archipelago. New Guinea was the last place to be exploited, probably because the difficulties of obtaining natives there were greater, while the Papuans did not readily adapt themselves to the new conditions in Queensland.

(ii) *Numbers Introduced.* It is estimated that up to the end of 1890 between 46,000 and 47,000 Kanakas had been brought to Australia. Of these, a few went to the sugar fields on the north coast of New South Wales. In Queensland, at the various censuses taken since 1868 up to the abolition of recruiting, their numbers were given as follows :—

KANAKAS IN QUEENSLAND—1868 TO 1901.

Year.	Males.	Females.	Total.
1868	1,536	7	1,543
1871	2,255	81	2,336
1881	6,000	396	6,396
1886	9,116	921	10,037
1891	8,498	745	9,243
1901	8,380	380	8,760

Owing to the abuses which had crept in, the Queensland Government decided in 1890 to terminate recruiting, but, as the idea of replacing the extensive plantations worked with the aid of Kanakas by small holdings worked by the holders themselves was found impracticable, the importation was allowed to continue.

3. **Commonwealth Legislation.**—In 1901, in accordance with the " White Australia " policy, the Commonwealth decided to abolish the recruiting of these island labourers, and an Act was passed whereby the traffic was to cease in 1904, while the Federal authorities were given power to deport any Kanaka found in Australia after 1906. The Pacific Island Labourers Act, 1901, was amended in 1906 to allow the following South Sea Islanders to settle in Australia:—(i) All who were in Queensland before October, 1879 ; (ii) those who had lived there continuously for 20 years ; (iii) Those whose return because of their marriage contrary to tribal customs involved risk either to themselves or their families ; (iv) the very old and infirm, and (v) the owners of freehold land.

There were at the end of 1906 roughly 5,000 Kanakas in Australia, and of these 3,642 were repatriated. Some of those exempted from deportation were settled on the little island of Moa, in Torres Strait.

4. **Number at the Census of 1921.**—At the census of 1921 there were 1,869 Melanesians in Queensland (1,351 males, 518 females), and 228 in New South Wales, while a few had drifted to some of the other States. Approximately 50 per cent. were born in Australia. Half-castes with one of the parents a European numbered about 300.

In addition to the Melanesians, it may be noted that owing to the annexation in 1878 by Queensland of the islands in Torres Strait, some 2,300 Papuans were included in the population of Australia. These have become civilized and, with a limited number of natives indentured from Papua, assist in manning the pearling fleet centred on Thursday Island.

CHAPTER XXV.

VITAL STATISTICS.

§ 1. Births.

1. Births, 1921 to 1925.—The number of male and female births and the total births registered in Australia during the years 1921 to 1925 are shown in the tables hereunder. The numerical relation which these births bear to the population, and various other associated features, are given in later tables.

MALE BIRTHS, 1921 TO 1925.

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust	Tas.	North. Ter.	Fed. Cap. Ter.	Australia.
1921	.. ..	28,005	18,288	10,638	6,122	3,988	2,944	39	15	70,039
1922	.. ..	28,218	18,738	10,263	6,150	4,163	2,995	38	17	70,582
1923	.. ..	27,713	18,565	10,163	5,976	4,014	2,888	40	6	69,365
1924	.. ..	27,350	18,500	10,050	5,941	4,215	2,700	29	15	68,800
1925	Single births	27,308	18,166	10,072	5,712	4,120	2,617	36	22	68,053
	Twins ..	563	419	241	112	90	47	..	..	1,472
	Triplets ..	7	7	3	..	..	..	..	..	17
	Total births	27,878	18,592	10,316	5,824	4,210	2,664	36	22	69,542

FEMALE BIRTHS, 1921 TO 1925.

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust	Tas.	North. Ter.	Fed. Cap. Ter.	Australia.
1921	.. ..	26,631	17,303	9,691	5,852	3,819	2,811	40	12	66,159
1922	.. ..	26,952	17,550	9,724	5,851	3,968	2,822	32	15	66,914
1923	.. ..	26,356	17.312	9,819	5,716	3,840	2,769	32	13	65,857
1924	.. ..	26,355	17,640	9,658	5,651	4,086	2,683	28	26	66,127
1925	Single births	26,181	16,961	9,761	5,477	3,874	2,513	29	25	64,821
	Twins ..	550	367	203	156	98	41	..	..	1,415
	Triplets ..	6	2	3	..	3	..	..	..	14
	Total births	26,737	17,330	9,967	5,633	3,975	2,554	29	25	66,250

TOTAL BIRTHS, 1921 TO 1925.

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust	Tas.	North. Ter.	Fed. Cap. Ter.	Australia.
1921	.. ..	54,636	35,591	20,329	11,974	7,807	5,755	79	27	136,198
1922	.. ..	55,170	36,288	19,987	12,001	8,131	5,817	70	32	137,496
1923	.. ..	54,069	35,877	19,982	11,692	7,854	5,657	72	19	135,222
1924	.. ..	53,705	36,140	19,708	11,592	8,301	5,383	57	41	134,927
1925	Single births	53,489	35,127	19.833	11,189	7,994	5,130	65	47	132,874
	Twins ..	(a)1,113	(c)786	(d)444	268	(b)188	88	..	..	2,887
	Triplets ..	(e)13	9	6	..	3	..	..	..	31
	Total births	54,615	35,922	20,283	11,457	8,185	5,218	65	47	135,792

(a) Thirteen stillborn twins not included.
(c) Six stillborn twins not included.
(b) Eight stillborn twins not included.
(d) Two stillborn twins not included.
(e) Two stillborn triplets not included.

2. **Birth Rates.**—The next table gives the crude birth rates for the years 1921 to 1925.

CRUDE BIRTH RATE(*a*), 1921 TO 1925.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
1921 ..	25.93	23.16	26.64	24.08	23.39	26.98	20.23	10.87	24.95
1922 ..	25.67	23.10	25.59	23.71	23.94	27.08	19.16	11.37	24.69
1923 ..	24.68	22.31	24.89	22.60	22.55	26.27	19.94	5.73	23.77
1924 ..	24.11	22.01	23.87	21.88	23.09	25.07	15.82	10.65	23.24
1925 ..	24.01	21.49	23.82	21.06	22.23	24.44	17.69	9.96	22.89

(*a*) Number of births per 1,000 of the mean annual population.

Generally speaking the crude birth rate of Australia has shown a constant decline for many years, and the rate for 1925 is the lowest yet recorded.

The principal factor in determining the crude birth rate is the proportion of *married* women of child-bearing age in the community, but as the fecundity of women varies with age, the birth rate per 1,000 married women will vary according to the age composition of the group, and, other things being equal, the rate generally should be highest where the average age of married women is lowest. For the purposes of the following table the child-bearing age has been taken as from 15–44 years inclusive, and all births of which the mothers were stated to be over 45 years have been counted in the group 40–44.

The following table shows some of the more important factors which affect the birth rates, and also the birth rates computed on various bases as follows:—Births per 1,000 of the population (crude); births per 1,000 women of child-bearing age; nuptial births per 1,000 married women of child-bearing age; births per 1,000 married women of child-bearing age corrected for inequalities in the age composition by taking the female population of Australia as a whole for a standard; and ex-nuptial births per 1,000 unmarried women aged 15–44 inclusive. The results are obtained from the births during the years 1920, 1921, and 1922 in relation to the age and conjugal condition of the population at the time of the Census of the 4th April, 1921.

The rates obtained from these computations place Tasmania first, and Queensland second, although the proportions of married women of child-bearing age in their populations were lower than the average for Australia. This result was due to the relatively low average age of the married women in these States, and the large proportion of ex-nuptial births. The relatively low proportion of married women of child-bearing age in Queensland was due to the large number of adult males employed in localities unsuited to women, a circumstance which accounts for the high masculinity of the population.

In Tasmania the relatively small proportion of married women arises from conditions directly opposite to those in Queensland. In the island State the numbers of the sexes were almost equal, while large numbers of the young adults emigrate to the mainland, leaving a population with abnormally high proportions of very young and very old. Although the proportion of married women of child-bearing age was lower in Tasmania than in Queensland, and the average age was the same in both States, Tasmania had the greater weight in the more productive age-groups—from 15 to 24 years.

Western Australia, though fifth in order of the crude birth rates, takes third place when the rates are computed in relation to women only, the change in position being due to the high masculinity. Although the average age of married women of reproductive ages was higher than in any other State, the uncorrected birthrate for nuptial births per 1,000 married women was higher than in New South Wales, Victoria, or South Australia. The adjustment for age improves the status of Western Australia very considerably, though not sufficiently to alter the sequence of its position.

The crude birth rate placed New South Wales third, but on the adjusted rate per 1,000 married women takes fifth place. The high position of New South Wales in regard to crude birth rates was due rather to the large proportion in the population of married women of child-bearing age than to their productiveness.

Victoria was the only State with an excess of females in its population, and the proportion to the total population of women aged 15–44 was the largest among the States, but as the proportion of these who were married was the lowest, the primary factor in the crude birth rate, viz., the proportion to the total population of married women of reproductive ages was the smallest.

The difference between the adjusted birth rates per 100 married women of child-bearing ages for New South Wales and Victoria was very small, and the proportions of ex-nuptial to all births in these States were almost identical.

Although 12.53 per cent. of its total population consisted of married women of child-bearing age—against an average of 12.20 for Australia—South Australia occupies fourth place in the order of crude birth rates. The advantage from its high proportion of potentially productive women was to some extent counteracted by their average age being somewhat above the average for Australia, while its position was also affected by the very small proportion of ex-nuptial births. The number of nuptial births per 100 women of child-bearing age in South Australia represented 18.71, as against 19.65 for Australia, but the difference was somewhat reduced by the adjusting process which makes the rate for South Australia 18.99 as against the Australian rate of 19.65.

BIRTH RATES, AND FACTORS AFFECTING THEM.—AVERAGE OF YEARS 1920, 1921, 1922.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
Crude birth rate per 1,000 persons.. ..	25.99	23.54	26.72	24.23	24.14	26.99	25.15
Birth rate per 100 women 15–44 incl. ..	11.04	9.79	11.83	10.25	11.05	11.91	10.74
Birth rate per 100 married women 15-44 incl.(*a*)	19.39	19.29	21.26	18.71	19.62	21.83	19.65
Birth rate per 100 married women 15–44 incl. (corrected for age variation)	19.14	19.44	20.77	18.99	20.44	21.24	19.65
Ex-nuptial births—per cent. on all births ..	4.82	4.84	5.00	3.28	4.02	5.11	4.69
Ex-nuptial births per 100 unmarried women 15–44 incl.	1.16	0.92	1.26	0.72	0.92	1.26	1.05
Women 15–44 incl.—per cent. all persons ..	23.54	24.02	22.57	23.65	21.83	22.67	23.41
Average age of all women 15–44 incl. ..	28.67	28.61	28.09	28.73	28.45	28.10	28.54
Married women 15–44 incl.—per cent. on all persons	12.75	11.61	11.93	12.53	11.81	11.73	12.20
Average age of married women 15–44 incl. ..	32.24	32.74	32.16	32.67	33.02	32.16	32.48

(*a*) Nuptial births only.

The following figures gives a comparison for Australia, at Census periods from 1880, of the total births per 1,000 women (married and unmarried) and of the nuptial births per 1,000 married women of ages 15 to 44 inclusive :—

Particulars.	1880–82.	1890–92.	1900–02.	1910–12.	1920–22.
Births per 1,000 women aged 15–44	169.7	158.8	117.3	117.2	107.4
Nuptial births per 1,000 married women 15–44..	321.0	332.0	235.8	236.0	196 5

3. Birth Rates of Various Countries.—(i) *Crude Rates.* A comparison with other countries shows that the Australian States occupy a midway position, which is, however, counterbalanced by a still lower position in regard to their death rates, as evidenced in the table hereinafter in the section dealing with "Deaths."

CRUDE BIRTH RATES(*a*).—VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Egypt	1925	48.8	Canada (excluding Quebec) ..	1925	22.6
Soviet Republics ..	1923	42.5	Finland	1925	22.4
Chile	1925	40.5	Western Australia ..	1925	22.2
Ceylon	1925	39.2	Northern Ireland ..	1925	22.0
Jamaica	1924	36.8	Victoria	1925	21.5
Rumania	1923	36.6	Austria	1924	21.4
Japan	1924	33.8	Scotland	1925	21.3
Quebec (Canada) ..	1923	32.3	United States (*b*) ..	1925	21.2
Bulgaria	1925	31.3	New Zealand ..	1925	21.2
Spain	1925	29.3	Denmark	1925	21.1
Hungary	1925	29.1	South Australia ..	1925	21.1
Italy	1924	28.2	Prussia	1924	20.8
Union of South Africa (whites)	1925	26.5	Germany	1925	20.6
Uruguay	1924	25.8	New York State ..	1925	20.6
Czecho-Slovakia ..	1925	25.7	Norway	1925	20.0
Tasmania	1925	24.4	Belgium	1925	19.8
Netherlands	1925	24.3	Irish Free State ..	1925	19.6
New South Wales ..	1925	24.0	France	1925	19.6
Queensland	1925	23.8	Great Britain ..	1924	19.3
Australia	**1925**	**22.9**	Switzerland ..	1924	18.7
Ontario (Canada) ..	1925	22.6	England and Wales	1925	18.3
			Sweden	1925	17.5

(*a*) Number of births per 1,000 of the mean population. (*b*) Figures for "provisional birth-registration area" which includes about 76 per cent. of the population.

(ii) *Nuptial Birth Rates at Child-bearing Ages.* The wide discrepancies between the crude birth rates of the various countries are, to some extent, due to differences in sex and age constitution and in conjugal condition. If the birth rates be calculated per 1,000 women of child-bearing ages, the comparison gives more reliable results. The comparative results given in the following table have been taken from the Annuaire International de Statistique, and are based on ages 15 to 49 years, Australia with a rate of 198 being, again, midway between maximum and minimum :—

NUPTIAL BIRTH RATES PER 1,000 MARRIED WOMEN AGED 15 TO 49 YEARS.—VARIOUS COUNTRIES.

Country.	Period.	Rate.	Country.	Period.	Rate.
Bulgaria	1910–11	280	**Australia**	**1906–15**	**198**
Ireland	1909–12	250	Hungary	1906–15	198
Netherlands	1905–14	233	Germany	1907–14	196
Finland	1906–15	230	Sweden	1908–13	196
Italy	1907–14	226	Denmark	1906–15	191
Norway	1907–14	224	New Zealand ..	1906–15	188
Austria	1908–13	219	Switzerland ..	1906–15	184
Spain	1906–15	218	England and Wales	1906–15	171
Prussia	1907–14	204	Belgium	1908–13	161
Scotland	1906–15	202	France	1910–11	114

4. Masculinity of Births.—(i) *General.* The masculinity of births, i.e., the excess of males over females per 100 births registered, during the last five years varied from 0.32 in Tasmania in 1924 to 4.66 in Queensland in 1921. On account of the smallness of the numbers, the returns from the Northern Territory and the Federal Capital Territory have not been taken into consideration. The following table gives particulars for the years 1921 to 1925.

MASCULINITY(*a*) OF BIRTHS REGISTERED, 1921 TO 1925.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
1921 ..	2.51	2.77	4.66	2.25	2.16	2.31	−1.27	11.11	2.85
1922 ..	2.29	3.27	2.70	2.49	2.40	2.97	8.77	6.25	2.67
1923 ..	2.51	3.49	1.72	2.22	2.22	2.10	11.11	−36.84	2.59
1924 ..	1.85	2.38	1.99	2.50	1.55	0.32	1.75	−26.83	1.98
1925 ..	2.09	3.51	1.72	1.67	2.87	2.11	10.77	−6.38	2.42

(*a*) Excess of males over females per 100 total births.

NOTE.—The minus sign (−) denotes an excess of females over males per 100 total births.

(ii) *Masculinity of Ex-nuptial Births.* The masculinity of ex-nuptial births was as follows :—

MASCULINITY(*a*) OF EX-NUPTIAL BIRTHS, 1921 TO 1925.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
1921 ..	3.94	2.72	−0.94	6.10	6.03	1.26	15.38	..	2.96
1922 ..	3.11	1.75	6.44	9.55	3.26	−2.64	−5.88	..	3.37
1923 ..	2.54	2.07	2.13	0.00	−5.96	−3.98	10.34	−100.00	1.72
1924 ..	3.21	−0.96	0.19	2.54	2.14	−5.26	7.69	100.00	1.20
1925 ..	4.12	4.86	−3.38	−4.18	8.66	−2.83	25.00	..	2.46

(*a*) Excess of males over females per 100 total ex-nuptial births.

NOTE.—The minus sign (−) denotes an excess of females over males per 100 total ex-nuptial births.

Although the general tendency of the change in the sex composition of the ex-nuptial births has been the same as in the total births, the results in the smaller States do not show the same consistency in the former as in the latter on account of the relatively small numbers involved.

(iii) *Masculinity of Nuptial and Ex-nuptial Births, Various Countries.* There is ordinarily a very small difference between the masculinity of nuptial and ex-nuptial births. Thus, according to the following table, for the period about 1906 to 1913, the masculinity in various countries ranged from 4.63 to 1.91, and from 5.90 to 0.06 for nuptial and ex-nuptial births respectively.

MASCULINITY OF BIRTHS.—VARIOUS COUNTRIES.

Country.	Period.	Masculinity of Births.(a) Nuptial Live Births.	Masculinity of Births.(a) Ex-nuptial Live Births.	Country.	Period.	Masculinity of Births.(a) Nuptial Live Births.	Masculinity of Births.(a) Ex-nuptial Live Births.
Spain	1906–13	4.63	5.90	Ireland	1906–12	2.61	1.63
Portugal	1906–10	3.93	0.06	New Zealand	1906–13	2.59	2.57
Finland	1906–13	3.03	2.09	**Australia**	**1906–13**	**2.52**	**2.27**
Sweden	1906–13	2.95	3.27	Netherlands	1906–13	2.49	1.53
Hungary	1906–13	2.86	2.02	Denmark	1906–13	2.43	2.22
Norway	1906–13	2.79	2.98	Switzerland	1906–13	2.38	1.21
Prussia	1906–13	2.79	2.12	Japan	1906–13	2.32	0.87
Russia, European	1906–09	2.77	2.00	France	1906–11	2.21	1.59
Austria	1906–13	2.76	2.73	Chile	1906–13	2.20	2.81
Germany	1906–13	2.71	2.29	Belgium	1906–13	2.08	1.31
Italy	1906–13	2.64	2.29	Scotland	1906–13	2.05	2.14
Serbia	1906–10	2.62	2.86	England and Wales	1906–13	1.91	2.07

(a) Excess of males over females per 100 total births.

5. **Ex-nuptial Births.**—(i) *General.* The number of ex-nuptial births reached its maximum, 7,438, in 1913, but it has since fallen considerably. On the average of the five years 1910–14, the number of ex-nuptial births in Australia was 7,171, while for the period 1921–25 it was only 6,291, a decline of 12.3 per cent., whereas the annual average total births for the same period increased by 5.2 per cent.

It is, of course, possible that the number of ex-nuptial births is somewhat understated, owing to diffidence in proclaiming the fact of ex-nuptiality, and it is not unlikely that the majority of unregistered births are ex-nuptial.

EX-NUPTIAL BIRTHS, 1921 TO 1925.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
1921	2,640	1,725	1,062	377	315	318	26	..	6,463
1922	2,667	1,602	932	356	337	265	17	..	6,176
1923	2,676	1,595	1,079	360	285	251	29	1	6,276
1924	2,589	1,668	1,052	355	327	228	13	1	6,233
1925	2,764	1,543	1,035	359	335	247	24	..	6,307

(ii) *Rate of Ex-nuptiality, 1921 to 1925.* The rate of ex-nuptiality, i.e., the percentage of ex-nuptial on total births fell from 4.75 in 1921 to 4.64 in 1925. On the basis of the figures given in the preceding sub-section the ex-nuptial rate fell from 5.55 per cent. of all births during the years 1910–14 to 4.63 per cent. for the years 1921–25.

PERCENTAGE OF EX-NUPTIAL ON TOTAL BIRTHS, 1921 TO 1925.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
	%	%	%	%	%	%	%	%	%
1921	4.83	4.85	5.22	3.15	4.03	5.53	32.91	..	4.75
1922	4.83	4.41	4.66	2.97	4.14	4.56	24.29	..	4.49
1923	4.95	4.45	5.40	3.08	3.63	4.44	40.28	5.26	4.64
1924	4.82	4.62	5.34	3.06	3.94	4.24	22.81	2.44	4.62
1925	5.06	4.30	5.10	3.13	4.09	4.73	36.92	..	4.64

A better comparison is obtained by calculating the number of ex-nuptial births per thousand of the single and widowed female population between the ages of 15 and 45. The calculation has been made for Australia for the last five Census periods for which the information is available, and covers in each case the Census year, together with the year immediately preceding and the year immediately following. The number of ex-nuptial births per 1,000 unmarried women of ages 15 to 45 has been found to be as follows :—Years 1880–82, 14.49 ; years 1890–92, 15.93 ; years 1900–02, 13.30 ; years 1910–12, 12.53 ; years 1920–22, 10.50. The comparative results given in the following table have been taken from the Annuaire International de Statistique, Vols. II. and V., and are based on ages 15 to 49 years :—

EX-NUPTIAL BIRTHS PER 1,000 UNMARRIED WOMEN AGED 15 TO 49 YEARS.—VARIOUS COUNTRIES.

Country.	Period.	Rate.	Country.	Period.	Rate.
Hungary	1906–15	38	Norway	1907–14	13
Austria	1908–13	30	Scotland	1906–15	13
Sweden	1908–13	26	**Australia**	**1906–15**	**12**
Denmark	1906–15	24	Belgium	1908–13	12
Germany	1907–14	23	New Zealand ..	1906–15	9
Prussia	1907–14	21	Switzerland ..	1906–15	8
Finland	1906–15	17	England and Wales ..	1906–15	7
France	1901–11	16	Netherlands ..	1905–14	5
Italy	1907–14	14	Ireland	1909–12	4
Spain	1906–15	14	Bulgaria	1910–11	4

(iii) *Comparison of Rates.* The following table shows the relative proportions of ex-nuptial and nuptial births to the total population during the last five years :—

CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH RATES (*a*).—AUSTRALIA, 1921 TO 1925.

Rates.	1921.	1922.	1923.	1924.	1925.
Ex-nuptial	1.18	1.11	1.10	1.07	1.06
Nuptial	23.77	23.58	22.67	22.17	21.83
Total	24.95	24.69	23.77	23.24	22.89

(*a*) Number of births per 1,000 of mean population.

6. **Multiple Births.**—Among the total number of 135,792 births registered in Australia in 1925, there were 132,874 single births, 2,887 twins, and 31 triplets. The number of cases of twins was 1,458, there being 29 stillbirths, and there were 11 cases of triplets, two children being stillborn. The total number of mothers was, therefore, 134,343, the proportion of mothers of twins being one in every 92, and of mothers of triplets one in every 12,213 of total mothers. The proportion of multiple births is fairly constant over an extended period.

MULTIPLE BIRTHS.—AUSTRALIA, 1921 TO 1925.

Year.	Cases of Twins.	Cases of Triplets.	Percentage of Cases of Multiple Births on total Mothers.	Number of Mothers to each Multiple Birth.
1921	1,453	12	1.09	92
1922	1,432	12	1.06	94
1923	1,394	6	1.04	96
1924	1,337	12	1.01	99
1925	1,458	11	1.08	91

7. **Ages of Parents.**—(i) *Single Births.* The relative ages of the parents of children registered in 1925 have been tabulated separately for male and female births, twins and triplets being distinguished from single births, and are shown for single ages and for every State in the Bulletin of "Australian Demography," No. 43, published by this Bureau. In the present work the exigencies of space allow only the insertion of corresponding tables showing the relative ages of parents in groups of five years. The largest number of fathers in the case of single births is found at ages 30 to 34, and of mothers at ages 25 to 29. When, however, the ages of both parents are considered together, the largest number of single births occurred when both father and mother were between the ages of 25 and 29.

AGES OF PARENTS IN CASES OF SINGLE BIRTHS.—AUSTRALIA, 1925.

Ages of Fathers and Sexes of Children.		Total Children.	Ages of Mothers.								
			Under 15.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and upwards.	Unspecified.
Under 20	Males..	360	..	274	80	4	2	..	..	..	..
	Females	338	..	250	79	7	2	..	..	..	..
	Total ..	698	..	524	159	11	4	..	..	..	..
20 to 24	Males..	7,258	4	1,692	4,532	903	114	12	1	..	..
	Females	6,938	2	1,574	4,435	828	85	13	1	..	..
	Total ..	14,196	6	3,266	8,967	1,731	199	25	2	..	..
25 to 29	Males..	15,904	2	687	6,226	7,469	1,310	187	23	..	..
	Females	15,093	..	663	5,962	6,985	1,308	159	15	1	..
	Total ..	30,997	2	1,350	12,188	14,454	2,618	346	38	1	..
30 to 34	Males..	16,669	..	168	2,466	6,657	6,242	1,039	94	3	..
	Females	15,681	..	179	2,317	6,221	5,844	1,027	92	1	..
	Total ..	32,350	..	347	4,783	12,878	12,086	2,066	186	4	..
35 to 39	Males..	12,785	..	65	741	2,716	4,854	3,966	430	12	1
	Females	12,231	..	50	707	2,603	4,654	3,806	400	8	3
	Total ..	25,016	..	115	1,448	5,319	9,508	7,772	830	20	4
40 to 44	Males..	7,008	..	15	208	795	1,865	2,728	1,347	49	1
	Females	6,733	..	15	203	715	1,845	2,653	1,256	46	..
	Total ..	13,741	..	30	411	1,510	3,710	5,381	2,603	95	1
45 to 49	Males..	3,207	..	3	60	250	581	1,211	973	128	1
	Females	3,091	1	5	67	228	541	1,186	934	128	1
	Total ..	6,298	1	8	127	478	1,122	2,397	1,907	256	2
50 to 54	Males..	1,129	..	1	29	65	201	378	384	70	1
	Females	1,116	..	1	17	67	188	372	399	72	..
	Total ..	2,245	..	2	46	132	389	750	783	142	1
55 to 59	Males..	376	..	..	13	20	61	126	121	35	..
	Females	383	..	2	7	24	46	153	121	30	..
	Total ..	759	..	2	20	44	107	279	242	65	..
60 to 64	Males..	121	..	..	3	4	25	44	37	8	..
	Females	114	..	..	3	8	25	29	40	9	..
	Total ..	235	..	..	6	12	50	73	77	17	..
65 and upwards	Males..	53	..	1	1	6	6	23	13	3	..
	Females	63	..	..	2	6	7	23	16	9	..
	Total ..	116	..	1	3	12	13	46	29	12	..
Not stated	Males..	5	..	1	..	2	1	1	..	..	..
	Females	2	..	..	..	1	..	..	..	..	1
	Total ..	7	..	1	..	3	1	1	..	..	1
Nuptial children	Males..	64,875	6	2,907	14,359	18,891	15,262	9,715	3,423	308	4
	Females	61,783	3	2,739	13,799	17,693	14,545	9,421	3,274	304	5
	Total ..	126,658	9	5,646	28,158	36,584	29.807	19,136	6,697	612	9
Ex-nuptial children	Males..	3,178	8	873	1,077	541	348	233	85	6	7
	Females	3,038	13	878	1,059	483	298	207	91	7	2
	Total ..	6,216	21	1,751	2,136	1,024	646	440	176	13	9
Total children	Males..	68,053	14	3,780	15,436	19,432	15,610	9,948	3,508	314	11
	Females	64,821	16	3,617	14,858	18,176	14,843	9,628	3,365	311	7
	Total ..	132,874	30	7,397	30,294	37,608	30,453	19,576	6,873	625	18

(ii) *Twins.* The ages of parents of twins in 1925 are given hereunder :—

AGES OF PARENTS OF TWINS.—AUSTRALIA, 1925.

Ages of Fathers and Sexes of Children.		Total Children.	Ages of Mothers.						
			Under 20.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and over.
Under 20 ..	Males ..	2	..	2	..	..	..	..	..
	Females ..	2	2	..	..	..	..	..	..
	Total ..	4	2	2	..	..	..	..	..
20 to 24 ..	Males ..	95	14	57	20	..	4	..	..
	Females ..	98	18	61	19	..	..	..	..
	Total ..	193	32	118	39	..	4	..	..
25 to 29 ..	Males ..	301	11	105	131	47	7	..	..
	Females ..	305	14	86	161	39	5	..	..
	Total ..	606	25	191	292	86	12	..	..
30 to 34 ..	Males ..	359	5	45	109	165	31	4	..
	Females ..	351	3	40	127	154	25	2	..
	Total ..	710	8	85	236	319	56	6	..
35 to 39 ..	Males ..	324	..	11	62	114	128	9	..
	Females ..	300	..	7	48	119	109	17	..
	Total ..	624	..	18	110	233	237	26	..
40 to 44 ..	Males ..	186	..	..	22	48	69	47	..
	Females ..	190	2	..	15	46	86	39	2
	Total ..	376	2	..	37	94	155	86	2
45 to 49 ..	Males ..	106	..	3	10	16	44	32	1
	Females ..	72	..	1	2	13	29	24	3
	Total ..	178	..	4	12	29	73	56	4
50 to 54 ..	Males ..	32	..	..	4	5	11	10	2
	Females ..	37	..	..	2	7	10	16	2
	Total ..	69	..	..	6	12	21	26	4
55 to 59 ..	Males ..	9	..	..	..	1	6	2	..
	Females ..	13	..	..	..	1	8	4	..
	Total ..	22	..	..	..	2	14	6	..
60 and over	Males ..	5	..	..	1	1	2	1	..
	Females ..	9	..	..	1	3	4	1	..
	Total ..	14	..	..	2	4	6	2	..
Nuptial children	Males ..	1,419	30	223	359	397	302	105	3
	Females ..	1,377	39	195	375	382	276	103	7
	Total ..	2,796	69	418	734	779	578	208	10
Ex-nuptial children	Males ..	53	10	18	10	13	2	..	..
	Females ..	38	12	13	4	5	4	..	..
	Total ..	91	22	31	14	18	6	..	..
Total children	Males ..	1,472	40	241	369	410	304	105	3
	Females ..	1,415	51	208	379	387	280	103	7
	Total ..	2,887	91	449	748	797	584	208	10

(iii) *Triplets.* Particulars regarding the ages of parents in cases of triplets are given in the next table :—

AGES OF PARENTS OF TRIPLETS.—AUSTRALIA, 1925.

Ages of Fathers and Sexes of Children.		Total Children.	Ages of Mothers. 20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.
30 to 34	Males	3	2	..	..	1	..
	Females	5	..	3	..	2	..
	Total	8	(*a*) 2	3	..	3	..
35 to 39	Males	8	..	..	6	..	2
	Females	4	..	..	3	..	1
	Total	12	..	..	9	..	3
40 to 44	Males	3	..	3	..	..	..
	Females	2	..	..	2	..	..
	Total	5	..	3	(*a*) 2	..	..
45 to 49	Males	..	..	..	..	..	..
	Females	3	..	..	..	3	..
	Total	3	..	..	..	3	..
50 to 54	Males	3	..	..	..	..	3
	Females	..	..	..	..	..	..
	Total	3	..	..	..	..	3
Total children	Males	17	2	3	6	1	5
	Females	14	..	3	5	5	1
	Total	31	2	6	11	6	6

(*a*) Excluding 1 triplet stillborn.

(iv) *Influence on Masculinity.* Valid deductions cannot, of course, be drawn from one year's figures as to variations in the masculinity of the births at different ages of the parents, but so far as the figures go the following conclusions are indicated :—In cases where the father is older than the mother the masculinity has a tendency to be above the average, while in cases where both parents belong to the same age group, or where the father is younger than the mother, the masculinity is rather below the average. It is also below the average in cases where the father, or both father and mother are under 25 ; and it is above the average where the mother alone is under 25.

8. **Birthplaces of Parents.**—The relative birthplaces of the parents of children whose births were registered during the year 1925 will be found in the Bulletin of "Australian Demography," published by this Bureau. A summary of the results of the tabulation is given hereunder.

BIRTHPLACES OF PARENTS.—AUSTRALIA, 1925.

Birthplaces.	Fathers. Single Births.	Fathers. Twins.	Fathers. Triplets.	Mothers of Nuptial Children. Single Births.	Mothers of Nuptial Children. Twins.	Mothers of Nuptial Children. Triplets.	Mothers of Ex-nuptial Children. Single Births.	Mothers of Ex-nuptial Children. Twins.
AUSTRALASIA—								
New South Wales	41,660	432	4	43,364	439	5	2,438	17
Victoria	32,464	357	3	31,967	361	2	1,415	12
Queensland	14,004	163	2	15,661	165	2	873	5
South Australia	10,823	145	..	10,374	123	..	340	2
Western Australia	2,870	28	1	3,813	44	..	261	1
Tasmania	5,630	48	..	5,606	57	..	314	5
Northern Territory	34	..	..	45	2	..	25	..
Federal Capital Territory	7	..	..	6	..	..	..	..
New Zealand	893	7	..	677	10	..	52	..

BIRTHPLACES OF PARENTS.—AUSTRALIA, 1925—*continued.*

Birthplaces.	Fathers.			Mothers of Nuptial Children.			Mothers of Ex-nuptial Children.	
	Single Births.	Twins.	Triplets.	Single Births.	Twins.	Triplets.	Single Births.	Twins.
EUROPE—								
England and Wales ..	11,136	156	..	10,067	148	2	316	3
Scotland	2,726	30	..	2,466	31	..	90	..
Ireland	1,273	12	..	829	13	..	28	..
Other British Possessions in Europe	139	2	..	98	1	..	3	..
Denmark	122	2	1	32	1	..	1	..
France	43	1	..	63	..	..	2	..
Germany	365	4	..	135	1	..	9	..
Greece	268	4	..	188	3	..	..	..
Italy	523	5	..	370	5	..	8	..
Netherlands	57	2	..	27	1	..	2	..
Norway	83	1	..	6	..	..	..	..
Poland	37	..	..	14	..	..	..	..
Russia	158	2	..	75	..	..	1	..
Sweden	84	2	..	10	..	..	..	..
Switzerland	45	..	..	24	..	..	..	..
Other European Countries	225	..	..	121	..	..	2	..
ASIA—								
British India and Ceylon	124	1	..	82	2	..	3	1
China	111	1	..	21	..	..	..	..
Japan	24	..	..	12	..	..	..	..
Syria	105	..	..	66	1	..	..	..
Other Countries in Asia	39	..	..	20	1	..	..	..
AFRICA—								
Union of South Africa ..	133	2	..	153	1	..	8	..
Other African Countries	35	..	..	26	..	..	..	..
AMERICA—								
Canada	78	1	..	37	..	..	2	..
United States of America	183	2	..	94	1	..	4	..
Other American Countries	34	1	..	33	..	..	3	..
POLYNESIA—								
Fiji	25	1	..	15	..	..	1	..
New Caledonia ..	12	..	..	14	1	..	..	..
New Hebrides ..	9	..	..	2	..	..	..	..
Other Polynesian Islands	25	..	..	8	..	..	1	..
At Sea	40	..	..	23	..	..	2	..
Unspecified	12	..	..	14	..	..	12	..
Total	126,658	1,412	11	126,658	1,412	11	6,216	46

9. Occupations of Fathers.—(i) *Year 1925.* A summary of the classes of occupations of the fathers of all nuptial children whose births were registered in 1925 is given in the following table :—

OCCUPATIONS OF FATHERS OF NUPTIAL CHILDREN.—AUSTRALIA, 1925.

Occupations.	Number of Fathers.
CLASS I.—PROFESSIONAL.	
Government, Defence, Law ..	2,377
Others	3,700
Total Class I.	6,077
CLASS II.—DOMESTIC.	
Board and Lodging	1,098
Others	1,082
Total Class II. ..	2,180
CLASS III.—COMMERCIAL.	
Property and Finance ..	1,631
Art, Mechanic, and Textile Products	1,049
Food and Drinks	4,443
Animal and Vegetable Substances	436
Fuel, Light, and Metals ..	333
Merchants and Dealers ..	2,791
Others	7,295
Total Class III. ..	17,978
CLASS IV.—TRANSPORT AND COMMUNICATION.	
Railway Traffic	5,222
Road and Tramway Traffic ..	7,579
Sea and River Traffic ..	1,537
Others	1,968
Total Class IV. ..	16,306
CLASS V.—INDUSTRIAL.	
Art and Mechanic Productions..	7,069
Textiles and Fibrous Materials..	1,986
Food and Drinks	2,268
Animal and Vegetable Substances	524
Metals and Minerals	3,684
Fuel, Light, and Energy ..	1,290
Building and Construction ..	7,909
Others	29,484
Total Class V.	54,214
CLASS VI.—AGRICULTURAL, PASTORAL, MINING, ETC.	
Agricultural	21,396
Pastoral	4,853
Mining and Quarrying ..	3,272
Others	1,561
Total Class VI. ..	31,082
CLASS VII.—INDEFINITE.	
Independent Means	187
Occupation Unspecified ..	57
Total Class VII. ..	244
TOTAL	128,081

(ii) *Summary, 1921 to 1925.* The next table gives a summary in classes of the occupations of fathers of nuptial children in each of the last five years, with the percentage of each class on the total number of fathers. In 1925, 42.33 per cent. of fathers were of the industrial class, and 24.27 per cent. were of the agricultural pastoral, mining, etc., class.

OCCUPATIONS OF FATHERS OF NUPTIAL CHILDREN.—AUSTRALIA, 1921 TO 1925.

Class.		1921.	1922.	1923.	1924.	1925.
I. Professional ..	No.	6,204	6,369	6,010	5,946	6,077
	%	4.83	4.90	4.71	4.67	4.74
II. Domestic ..	No.	2,319	2,045	2,242	2,098	2,180
	%	1.81	1.57	1.76	1.64	1.70
III. Commercial ..	No.	18,298	18,731	18,210	18,519	17,978
	%	14.26	14.41	14.27	14.54	14.04
IV. Transport and Communication ..	No.	15,351	15,809	15,244	15,670	16,306
	%	11.96	12.17	11.95	12.30	12.73
V. Industrial ..	No.	53,567	54,104	53,737	53,899	54,214
	%	41.75	41.64	42.11	42.31	42.33
VI. Agricultural, pastoral, mining, etc. ..	No.	32,405	32,665	31,974	31,046	31,082
	%	25.25	25.14	25.06	24.37	24.27
VII. Indefinite ..	No.	169	204	186	213	244
	%	0.13	0.16	0.14	0.17	0.19
VIII. Dependents ..	No.	13	7	..	..	..
	%	0.01	0.01	..	..	..
Total	No.	128,326	129,934	127,603	127,391	128,081
	%	100.00	100.00	100.00	100.00	100.00

10. **Mother's Age, Duration of Marriage, and Issue.**—(i) *General.* The total number of nuptial confinements in 1925 was 128,081, viz., 126,658 single births, 1,412 cases of twins, and 11 cases of triplets, but in 77 cases the necessary information was lacking, and the following series of tables refers, therefore, to 128,004 nuptial confinements. Ex-nuptial children—previous issue by the same father—are included as previous issue, but children by former marriages, and stillborn children are excluded. The tables cannot be given *in extenso*, but the following are their most salient features. The complete tabulations are shown in "Australian Demography," No. 43.

(ii) *Duration of Marriage and Issue of Mothers.* The following table shows that the duration of marriage of mothers of nuptial children ranged from less than one year up to between 34 and 35 years, and that the average family increased fairly regularly with the duration of marriage. The average number of children of all marriages was 3.10, the corresponding figures for 1924 being 3.08; for 1923, 3.08; for 1922, 3.10; and for 1921, 3.08.

DURATION OF MARRIAGE AND ISSUE OF MOTHERS.—AUSTRALIA, 1925.

Duration of Marriage.	Total Mothers.	Total Issue.	Average Number of Children.	Duration of Marriage.	Total Mothers.	Total Issue.	Average Number of Children.
Years.				Years.			
0–1 ..	19,552	19,741	1.01	19–20 ..	1,100	8,746	7.95
1–2 ..	12,197	14,536	1.19	20–21 ..	886	7,224	8.15
2–3 ..	11,351	20,286	1.79	21–22 ..	649	5,693	8.77
3–4 ..	11,193	23,383	2.09	22–23 ..	523	4,712	9.01
4–5 ..	10,667	26,313	2.47	23–24 ..	369	3,329	9.02
5–6 ..	9,813	27,627	2.82	24–25 ..	232	2,253	9.71
6–7 ..	7,492	23,602	3.15	25–26 ..	186	1,872	10.06
7–8 ..	5,542	19,413	3.50	26–27 ..	91	945	10.38
8–9 ..	4,812	18,243	3.79	27–28 ..	59	676	11.46
9–10 ..	4,760	19,468	4.09	28–29 ..	23	284	12.35
10–11 ..	4,809	21,150	4.40	29–30 ..	15	155	10.33
11–12 ..	4,155	20,170	4.85	30–31 ..	6	61	10.17
12–13 ..	3,781	19,423	5.14	31–32 ..	1	13	13.00
13–14 ..	3,328	18,559	5.58	32–33 ..	1	13	13.00
14–15 ..	2,840	16,787	5.91	33–34 ..	1	16	16.00
15–16 ..	2,467	15,811	6.41	34–35 ..	1	14	14.00
16–17 ..	2,007	13,277	6.62				
17–18 ..	1,699	11,962	7.04	Total ..	128,004	396,356	3.10
18–19 ..	1,396	10,599	7.59				

(iii) *Ages of Mothers and Issue.* The ages of mothers, issue, and average family are given in the attached table, which shows that the average family increased fairly regularly to a maximum of 8.07 children in the age-group 45 years and over, and that the greatest number of mothers occurs in the group 25 to 29 years.

AGES AND ISSUE OF MOTHERS.—AUSTRALIA, 1925.

Ages of Mothers.	Total Mothers.	Total Issue.	Average Number of Children.	Ages of Mothers.	Total Mothers.	Total Issue.	Average Number of Children.
Under 20 years	5,689	6,880	1.21	40–44 years ..	6,803	43,033	6.33
20–24 years ..	28,322	49,046	1.73	45 yrs. and over	617	4,980	8.07
25–29 ,, ..	36,954	91,821	2.48				
30–34 ,, ..	30,198	106,490	3.53				
35–39 ,, ..	19,421	94,106	4.85	All ages ..	128,004	396,356	3.10

(iv) *Previous Issue of Mothers, Various Ages.* The previous issue, according to the age of the mother, is given in the following table.

PREVIOUS ISSUE OF MOTHERS OF VARIOUS AGES.—AUSTRALIA, 1925.

Previous Issue.	Mothers' Ages.							
	Under 20 Years.	20–24 Years.	25–29 Years.	30–34 Years.	35–39 Years.	40–44 Years.	45 Years and Over.	Total.
0	4,619	14,595	10,879	4,823	1,735	393	15	37,059
1	991	8,554	10,620	6,169	2,329	481	21	29,165
2	71	3,850	7,680	5,997	2,837	578	30	21,043
3	8	1,076	4,384	4,718	2,745	728	33	13,692
4	..	209	2,152	3,428	2,516	746	52	9,103
5	..	30	836	2,411	2,208	747	48	6,280
6	..	8	281	1,466	1,831	726	74	4,386
7	..	..	93	715	1,363	622	61	2,854
8	..	..	19	296	872	592	57	1,836
9	..	..	8	121	578	510	73	1,290
10	..	..	1	40	238	303	62	644
11	..	..	1	11	99	179	30	320
12	..	..	..	3	43	106	25	177
13	..	..	..	..	17	43	24	84
14	..	..	..	..	9	30	3	42
15	..	..	..	..	1	12	6	19
16	..	..	..	..	..	5	1	6
17	..	..	..	..	..	1	1	2
19	..	..	..	..	..	1	1	2
Total Mothers	5,689	28,322	36,954	30,198	19,421	6,803	617	128,004

(v) *Previous Issue of Mothers of Twins and Triplets.* Figures regarding the previous issue of mothers of twins and triplets show that 304 mothers had twins at their first confinement; 297 at their second; 231 at their third; 173 at their fourth;

137 at their fifth; 93 at their sixth; 55 at their seventh; 41 at their eighth; 35 at their ninth; 31 at their tenth; 6 at their eleventh; 5 at their twelfth; 1 at her thirteenth; 1 at her fourteenth; and 2 at their fifteenth.

Of the 11 cases of triplets registered during 1925, 4 were second confinements, 2 third, 1 fourth, 2 seventh, and 2 the eighth.

11. Interval between Marriage and First Birth.—(i) *Interval and Sex of Children.* The following table shows the interval between marriage and first birth, distinguishing the sexes of the children. Twins and triplets are included, the eldest born only being enumerated :—

INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH.—AUSTRALIA, 1925.

Interval.	Number of First Children.			Interval.	Number of First Children.		
	Males.	Females.	Total.		Males.	Females.	Total.
Under 1 month	162	128	290	2 years ..	1,578	1,455	3,033
1 month ..	242	232	474	3 ,, ..	876	906	1,782
2 months ..	355	340	695	4 ,, ..	522	500	1,022
3 ,, ..	516	513	1,029	5 ,, ..	331	293	624
4 ,, ..	644	648	1,292	6 ,, ..	175	156	331
5 ,, ..	831	760	1,591	7 ,, ..	96	109	205
6 ,, ..	1,125	1,018	2,143	8 ,, ..	67	65	132
7 ,, ..	1,180	1,129	2,309	9 ,, ..	48	54	102
8 ,, ..	729	703	1,432	10 ,, ..	58	42	100
9 ,, ..	1,565	1,483	3,048	11 ,, ..	28	26	54
10 ,, ..	1,491	1,518	3,009	12 ,, ..	27	23	50
11 ,, ..	1,114	1,088	2,202	13 ,, ..	14	9	23
12 ,, ..	942	866	1,808	14 ,, ..	13	9	22
13 ,, ..	644	646	1,290	15 ,, ..	11	4	15
14 ,, ..	585	528	1,113	16 ,, ..	4	6	10
15 ,, ..	526	479	1,005	17 ,, ..	2	2	4
16 ,, ..	444	414	858	18 ,, ..	3	1	4
17 ,, ..	417	378	795	19 ,, ..	5	2	7
18 ,, ..	375	315	690	20 ,, ..	1	1	2
19 ,, ..	317	306	623	21 ,, ..	1	..	1
20 ,, ..	303	266	569	22 ,, ..	1	..	1
21 ,, ..	258	241	499	23 ,, ..	2	..	2
22 ,, ..	218	192	410				
23 ,, ..	187	172	359	Total ..	19,033	18,026	37,059

The masculinity of first births was 2.72 as compared with 2.42 for total births.

(ii) *Ages of Mothers and Interval.* The previous issue of mothers of ex-nuptial children is not recorded, but for the purposes of the following table all ex-nuptial births have been assumed to be first births. The table shows the ages of mothers in the cases of ex-nuptial first births, of nuptial first births occurring less than nine months after marriage, and of nuptial first births occurring nine months or more after marriage. A comparison of the combined total of the first two columns with the total of nuptial children born nine months or more after marriage shows that for all ages the ratio was about 2 to 3. At all ages up to and including 21, however, there was a great preponderance of ex-nuptial births and of births following on ante-nuptial conception. It must, of course, be understood that a certain number of premature births is necessarily included among the births which occurred less than nine months after marriage, but information in connexion therewith is not available.

AGES OF MOTHERS AND INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH, ETC.—AUSTRALIA, 1925.

Age of Mother at Birth of Child.	Ex-nuptial Births.	Nuptial Births less than nine months after Marriage.	Total of two preceding columns.	Nuptial First Births nine months after Marriage. and later.	Total Nuptial First Births.	Nuptial First Births and Ex-nuptial Births.
12 years ..	1	..	1	..	..	1
13 ,, ..	2	..	2	..	..	2
14 ,, ..	18	8	26	1	9	27
15 ,, ..	70	36	106	2	38	108
16 ,, ..	187	209	396	20	229	416
17 ,, ..	361	615	976	129	744	1,105
18 ,, ..	547	1,074	1,621	363	1,437	1,984
19 ,, ..	597	1,387	1,984	775	2,162	2,759
20 ,, ..	602	1,413	2,015	1,177	2,590	3,192
21 ,, ..	495	1,359	1,854	1,493	2,852	3,347
22 ,, ..	384	1,077	1,461	1,953	3,030	3,414
23 ,, ..	369	874	1,243	2,229	3,103	3,472
24 ,, ..	302	748	1,050	2,272	3,020	3,322
25 ,, ..	312	570	882	2,396	2,966	3,278
26 ,, ..	192	376	568	2,022	2,398	2,590
27 ,, ..	169	288	457	1,868	2,156	2,325
28 ,, ..	191	244	435	1,583	1,827	2,018
29 ,, ..	167	182	349	1,350	1,532	1,699
30 ,, ..	144	145	289	1,200	1,345	1,489
31 ,, ..	121	120	241	959	1,079	1,200
32 ,, ..	159	104	263	861	965	1,124
33 ,, ..	113	77	190	666	743	856
34 ,, ..	118	83	201	608	691	809
35 ,, ..	121	57	178	468	525	646
36 ,, ..	97	47	144	358	405	502
37 ,, ..	90	41	131	300	341	431
38 ,, ..	83	32	115	256	288	371
39 ,, ..	52	24	76	152	176	228
40 ,, ..	61	26	87	117	143	204
41 ,, ..	46	13	59	88	101	147
42 ,, ..	31	11	42	59	70	101
43 ,, ..	22	6	28	40	46	68
44 ,, ..	16	9	25	24	33	49
45 ,, ..	9	..	9	8	8	17
46 ,, ..	4	..	4	5	5	9
47 ,, ..	..	..	..	1	1	1
48 ,, ..	..	..	..	1	1	1
Unspecified ..	9	..	9	..	..	9
Total ..	6,262	11,255	17,517	25,804	37,059	43,321

12. **Interval between Birth and Registration of Birth.**—Information was obtained for the years 1911 to 1921 regarding the period which elapsed between birth and registration. A detailed table giving the results for 1921 is contained in Demography Bulletin No. 39, issued by this Bureau. The law relating to maternity allowances has tended to accelerate the registration of births; and during the year under review it was found that approximately 35 per cent. were registered in the first week.

Since the granting of the maternity allowance the weighted average interval between the dates of birth and registration has been found to be about 13 days both for nuptial and ex-nuptial children.

§ 2. Marriages.

1. **Marriages, 1921 to 1925.**—The number of marriages registered in Australia during 1925 was 46,899, giving a rate of 7.91 per 1,000 of the mean population for the year. Totals for the years 1921 to 1925 are given hereunder :—

MARRIAGES, 1921 TO 1925.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1921 ..	18,506	13,676	5,963	4,383	2,656	1,668	15	2	46,869
1922 ..	17,580	12,996	5,878	4,144	2,446	1,674	13	..	44,731
1923 ..	17,523	13,126	5,814	4,099	2,376	1,592	7	4	44,541
1924 ..	18,072	13,296	6,234	4,121	2,596	1,529	17	4	45,869
1925 ..	18,522	13,370	6,471	4,255	2,746	1,504	20	11	46,899

2. **Marriage Rates, 1921 to 1925.**—The number of marriages registered per 1,000 of mean population is given in the following table for the same period :—

CRUDE MARRIAGE RATES (*a*), 1921 TO 1925.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1921 ..	8.78	8.90	7.82	8.82	7.96	7.82	3.84	0.81	8.59
1922 ..	8.18	8.27	7.52	8.19	7.20	7.79	3.56	..	8.03
1923 ..	8.00	8.16	7.24	7.29	6.82	7.39	1.94	1.21	7.83
1924 ..	8.11	8.10	7.55	7.78	7.22	7.12	4.72	1.04	7.90
1925 ..	8.14	8.00	7.60	7.82	7.46	7.05	5.43	2.33	7.91

(*a*) Number of marriages (not persons married) per 1,000 of mean annual population.

As in some international tabulations the marriage rates are calculated per 1,000 of the unmarried population of 15 years and over, the corresponding rates have been worked out for Australia for the last four Census periods for which the particulars are available. The figures comprise in each case the Census year with the year immediately preceding and the year immediately following, and are as follows :—Years 1880–82, 48.98; years 1890–92, 45.74; years 1900–02, 42.14; years 1910–12, 50.44; years 1920–22, 56.02. These rates refer, of course, to persons married and not to marriages, as is the case in the preceding table.

3. **Marriage Rates in Various Countries.**—The following table shows the marriage rate for Australia in comparison with various other countries :—

CRUDE MARRIAGE RATES (*a*).—VARIOUS COUNTRIES.

Country.	Year.	Crude Marriage Rate.	Country.	Year.	Crude Marriage Rate.
Soviet Republics ..	1923	12.8	Western Australia ..	1925	7.5
United States (*b*) ..	1924	10.1	Netherlands ..	1925	7.4
Rumania	1923	9.9	Ontario (Canada) ..	1925	7 4
Belgium	1925	9.6	Chile	1925	7.4
Czecho-Slovakia ..	1925	9.2	Switzerland ..	1924	7.3
France	1925	9.0	Prussia	1924	7.2
Hungary	1925	8.9	Spain	1925	7.2
Japan	1924	8.7	Tasmania	1925	7.1
South African Union (*c*)	1925	8.6	Canada (excluding Quebec)	1925	6.9
New Zealand ..	1925	8.3	Ceylon	1925	6.8
New South Wales ..	1925	8.1	Quebec (Canada) ..	1923	6.7
Victoria	1925	8.0	Scotland	1925	6.6
Austria	1924	8.0	Finland	1925	6.3
Australia	**1925**	**7.9**	Sweden	1925	6.2
South Australia ..	1925	7.8	Northern Ireland ..	1925	6.1
Italy	1924	7.7	Norway	1925	5.9
Germany	1925	7.7	Uruguay	1924	5.7
Denmark	1925	7.6	Irish Free State ..	1924	4.7
England and Wales ..	1925	7.6	Jamaica	1924	3.5
Queensland	1925	7.6			
Great Britain ..	1924	7.5			

(*a*) Number of marriages per 1,000 of mean population.
(*b*) Registration area includes about 87 per cent of total population.
(*c*) White population only.

4. **Age and Conjugal Condition at Marriage.**—(i) *General.* The ages at marriage of bridegrooms and brides will be found in "Australian Demography," Bulletin No. 43. A summary in age groups is given in the table hereunder, which also shows the previous conjugal condition of the contracting parties. There were 2,514 males who were less than twenty-one years of age married during 1925, while the corresponding number of females was 10,163. At the other extreme there were 48 men of sixty-five years and upwards, who described themselves as bachelors, and 10 spinsters of corresponding age.

AGES AND CONJUGAL CONDITION OF PERSONS MARRIED.—AUSTRALIA, 1925.

Age at Marriage.	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
Under 20	1,194	..	..	1,194	7,076	7	3	7,086
20–24 years	14,913	24	10	14,947	19,538	66	46	19,650
25–29 ,,	14,660	174	57	14,891	10,443	243	201	10,887
30–34 ,,	6,930	327	189	7,446	3,812	448	238	4,498
25–39 ,,	2,997	503	206	3,706	1,585	521	189	2,295
40–44 ,,	1,306	455	152	1,913	631	392	106	1,129
45–49 ,,	636	398	98	1,132	292	309	43	644
50–54 ,,	252	356	46	654	128	199	24	351
55–59 ,,	142	287	16	445	56	119	5	180
60–64 ,,	60	211	21	292	22	68	4	94
65 years and over ..	48	225	4	277	10	73	..	83
Unspecified	..	2	..	2	..	2	..	2
Total	43,138	2,962	799	46,899	43,593	2,447	859	46,899

(ii) *Relative Ages, Bridegrooms and Brides.* The relative ages of bridegrooms and brides are shown for single years in "Australian Demography," Bulletin No. 43: a condensation into age-groups of five years is given below :—

RELATIVE AGES OF PERSONS MARRIED.—AUSTRALIA, 1925.

Ages.		Total Bridegrooms.	Ages of Brides.								
			Under 15.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and upwards.	Not stated.
Ages of Bridegrooms.	Under 20 ..	1,194	2	866	295	28	3	..	..	..	..
	20 to 24 ..	14,947	12	4,225	8,880	1,584	198	40	6	2	..
	25 to 29 ..	14,891	1	1,458	7,236	5,003	974	185	22	12	..
	30 to 34 ..	7,446	..	369	2,265	2,660	1,549	468	102	33	..
	35 to 39 ..	3,706	1	94	654	1,060	956	685	191	65	..
	40 to 44 ..	1,913	..	39	206	348	463	422	301	134	..
	45 to 49 ..	1,132	..	14	76	133	188	280	211	230	..
	50 to 54 ..	654	..	4	24	43	97	103	154	229	..
	55 to 59 ..	445	..	1	9	14	51	55	77	238	..
	60 to 64 ..	292	..	...	4	10	13	32	44	189	..
	65 and upwards	277	..	..	1	4	6	25	21	220	..
	Not stated ..	2	..	..	..	..	..	..	..	..	2
Total Brides ..		46,899	16	7,070	19,650	10,887	4,498	2,295	1,129	1,352	2

(iii) *Average Ages, Bridegrooms and Brides.* The age at marriage of brides has remained fairly stationary during recent years at an average of about 26 years. The figures for the five years are :—1921, 26.16 years; 1922, 26.14 years; 1923, 25.61 years; 1924, 25.46 years; and 1925, 25.45 years. For the five years 1907–11 the average age was 25.70 years, compared with 25.92 years for the five years 1912–16, 26.07 years for the five years 1917–21, and 25.76 years for the five years 1921–1925. The average age of bridegrooms in 1921 was 29.74 years; in 1922, 29.65 years; in 1923, 29.12 years; in 1924, 28.99 years; and in 1925, 28.94 years. It follows, therefore, that brides are generally speaking rather less than three and one-half years younger than bridegrooms.

5. **Previous Conjugal Condition.**—The number of bachelors and spinsters, widowed and divorced persons, who were married during the year 1925 has already been given. The following table shows the conjugal condition of the contracting parties :—

PREVIOUS CONJUGAL CONDITION OF PERSONS MARRIED.—AUSTRALIA, 1925.

Conjugal Condition.		Total Bridegrooms.	Brides.		
			Spinsters.	Widows.	Divorced.
Bridegrooms	Bachelors ..	43,138	41,063	1,434	641
	Widowers ..	2,962	1,939	887	136
	Divorced ..	799	591	126	82
Total Brides ..		46,899	43,593	2,447	859

6. **Birthplaces of Persons Married.**—The following table shows the birthplaces of persons who were married in 1925. In "Australian Demography," Bulletin No. 43 the relative birthplaces of bridegrooms and brides will be found tabulated in full detail.

BIRTHPLACES OF PERSONS MARRIED.—AUSTRALIA, 1925.

Birthplaces.	Bridegrooms.	Brides.
AUSTRALASIA—		
New South Wales	14,777	15,744
Victoria	11,950	12,391
Queensland	5,027	5,503
South Australia	3,923	3,978
Western Australia	1,602	1,867
Tasmania	1,850	1,900
Northern Territory	17	18
Federal Capital Territory	3	2
New Zealand	444	357
EUROPE—		
England and Wales	4,453	3,284
Scotland	1,172	891
Ireland	448	309
Other British Possessions in Europe	54	29
Belgium	5	5
Denmark	49	7
Finland	18	3
France	27	20
Germany	125	61
Greece	79	40
Italy	193	123
Netherlands	24	3
Norway	20	11
Russia	51	27
Spain	14	10
Sweden	46	5
Switzerland	33	5
Other Countries in Europe	44	27
ASIA—		
British India and Ceylon	45	25
China	12	2
Syria	17	19
Other Countries in Asia	25	14
AFRICA—		
Union of South Africa	89	80
Other African Countries	14	6
AMERICA—		
Canada	40	22
United States	141	38
Other American Countries	18	18
POLYNESIA		
Fiji	7	11
Other Polynesian Islands	24	19
At Sea	10	11
Unspecified	9	14
Total	46,899	46,899

7. **Occupations and Ages of Bridegrooms.**—A tabulation has been made of the occupations and ages of all males married in Australia, and the results for 1925 are published in detail in "Australian Demography," Bulletin No. 43. An abridgment of this tabulation is given below. The average ages of the persons falling under the twenty-eight subdivisions were determined, and it appears that, apart from the Indefinite class, which consists chiefly of persons who have retired from business and who are living on income from investments, and who may be expected to have reached a comparatively high age before attaining a position of financial independence, the average age ranges from 26.97 years for those employed on roads and trams, to 31.95 years in the class engaged in pastoral pursuits. On the experience of 1925 the average age at marriage of bridegrooms in the larger classes of occupations was as follows :—Professional, 29.8 years ; Domestic, 30.4 years ; Commercial, 29.2 years ; Transport, 27.9 years ; Industrial, 28.2 years ; and Primary Producers, 30.5 years.

OCCUPATIONS AND AGES OF BRIDEGROOMS.—AUSTRALIA, 1925.

Ages at Marriage.	Professional.		Domestic.		Commercial.							Transport and Communication.			
	Government, Defence, and Law.	Others.	Board and Lodging.	Others.	Property and Finance.	Art, Mechanic, and Textile Products.	Food and Drinks.	Animal and Vegetable Substances.	Fuel, Light and Metals.	Merchants and Dealers.	Others.	Railways.	Roads and Trams.	Sea and Rivers.	Others.
15 years ..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
16 ,, ..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..
17 ,, ..	..	3	..	2	..	1	1	..	..	..	2	1	9	..	1
18 ,, ..	2	7	2	7	..	5	18	..	..	6	23	4	24	4	4
19 ,, ..	3	9	4	11	2	4	39	..	..	14	48	17	76	7	7
20 ,, ..	12	31	12	14	4	6	63	1	..	16	64	36	105	17	11
21 ,, ..	43	55	25	25	8	13	139	2	1	47	213	82	204	44	37
22 ,, ..	59	95	23	25	23	27	134	4	5	49	217	106	238	62	45
23 ,, ..	84	117	24	34	34	32	144	8	5	80	335	118	249	64	53
24 ,, ..	106	162	23	30	51	35	167	13	6	74	414	123	248	62	66
25 ,, ..	107	176	34	29	47	36	141	12	8	71	437	118	216	57	65
26 ,, ..	116	200	32	24	66	30	92	13	6	73	365	115	182	38	76
27 ,, ..	98	123	29	24	60	34	80	12	6	65	286	87	141	40	70
28 ,, ..	75	124	17	23	63	31	90	16	7	63	272	53	127	49	58
29 ,, ..	62	83	20	17	53	23	67	9	3	59	238	68	97	36	54
30 ,, ..	69	79	23	19	40	20	47	6	5	42	215	64	88	30	39
31 ,, ..	53	55	19	10	25	19	68	6	3	47	154	53	80	23	29
32 ,, ..	33	68	21	11	28	18	50	5	1	39	139	49	67	31	27
33 ,, ..	31	47	16	13	23	14	32	10	3	29	137	29	50	23	21
34 , ..	44	42	17	12	23	6	46	2	3	28	119	29	38	16	17
35 to 39 ..	83	171	66	39	55	39	108	16	7	116	346	92	158	72	43
40 ,, 44 ..	46	79	28	19	32	19	50	8	5	59	164	52	70	36	21
45 ,, 49 ..	30	46	23	8	22	16	32	6	4	33	90	33	40	33	5
50 and over	54	79	26	18	41	21	40	5	6	66	105	33	38	29	11
Not stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	1,210	1,851	484	414	700	449	1,649	154	84	1,076	4,384	1,363	2,546	773	760
Average age—year 1925	29.78	29.78	31.49	29.16	31.12	30.07	27.71	30.74	31.75	30.89	28.81	28.39	26.97	29.73	27.93

Ages at Marriage.	Manufacturing.								Primary Producers.				Indefinite.
	Art and Mechanic Productions.	Textiles and Fibrous Materials.	Food and Drinks.	Animal and Vegetable Substances.	Metals and Minerals.	Fuel, Light, and Energy.	Building and Construction.	Others.	Agricultural.	Pastoral.	Mining and Quarrying.	Others.	
15 years ..	..	..	..	..	..	..	..	..	..	..	..	..	..
16 ,, ..	2	1	1	..	..	..	2	4	2	..	1	..	..
17 ,, ..	4	3	2	..	3	1	9	24	6	1	1	..	..
18 ,, ..	22	11	9	3	20	4	24	98	15	6	10	2	..
19 ,, ..	51	28	26	6	42	6	59	237	44	4	22	7	..
20 ,, ..	108	28	38	11	71	10	77	412	102	14	46	10	1
21 ,, ..	240	55	80	19	110	42	177	809	210	54	78	18	2
22 ,, ..	230	70	67	17	125	54	209	811	293	61	84	25	1
23 ,, ..	278	67	85	18	111	50	219	874	339	72	79	34	3
24 ,, ..	295	79	96	18	132	61	208	906	421	118	73	39	1
25 ,, ..	299	54	68	20	121	75	211	781	429	112	79	31	2
26 ,, ..	248	42	61	17	95	52	187	641	401	121	57	16	3
27 ,, ..	208	45	40	13	97	45	179	538	390	99	40	18	1
28 ,, ..	191	38	26	2	59	27	140	502	333	104	44	26	1
29 ,, ..	134	32	28	15	67	33	160	406	355	88	33	18	..
30 ,, ..	137	26	27	3	50	19	137	344	295	69	27	13	..
31 ,, ..	96	31	17	6	25	16	90	310	300	80	19	8	2
32 ,, ..	86	24	26	4	32	16	76	294	247	64	19	6	1
33 ,, ..	68	23	21	4	35	12	72	245	198	63	17	8	2
34 ,, ..	82	16	17	5	25	10	57	214	190	62	13	6	2
35 to 39 ..	215	53	50	17	95	29	249	703	607	186	58	27	6
40 ,, 44 ..	92	23	26	5	44	9	108	401	333	124	37	16	7
45 ,, 49 ..	49	22	17	3	22	11	63	226	184	74	26	7	7
50 and over	84	27	27	3	42	9	123	326	228	99	49	8	71
Not stated	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	3,219	798	855	209	1,423	591	2,836	10,106	5,922	1,675	912	343	113
Average age—year 1925	27.88	28.13	27.49	27.01	27.56	27.13	29.10	28.19	30.46	31.95	28.59	28.25	49.03

8. **Fertility of Marriages.**—The quotient obtained by division of the nuptial births registered, e.g., during the five years 1921 to 1925, by the number of marriages registered during the five years 1916 to 1920, i.e., the period antecedent by five years to the period of the births, has been called the "fertility of marriages." The quotient for this period is 3.25—in other words, the number of children to be expected from every marriage in Australia is about three. This method, while not absolutely accurate, generally furnishes results which agree fairly well with those found by more elaborate and careful investigation. For the following five-yearly periods the results were:—1916–20, 2.90; 1917–21, 2.91; 1918–22, 3.07; 1919–23, 3.25; 1920–24, 3.36; and 1921–25, 3.25.

9. **Registration of Marriages.**—(i) *Marriages in each Denomination.* In all the States marriages may be celebrated either by ministers of religion whose names are registered for that purpose with the Registrar-General, or by certain civil officers—in most cases district registrars. Most of the marriages are celebrated by ministers of religion. The proportions so celebrated in 1925 were:—New South Wales, 93.90 per cent.; Victoria, 95.15 per cent.; Queensland, 95.97 per cent.; South Australia, 95.07 per cent.; Western Australia, 81.10 per cent.; and Tasmania, 96.08 per cent., the percentage for Australia being 94.26. The registered ministers in 1925 belong to more than forty different denominations, some of which, however, can hardly be regarded as having any valid existence. A number of these have been omitted from the tabulation and are bracketed under the heading "Other Christians." The figures for 1925 are shown in the following table:—

MARRIAGES IN EACH DENOMINATION.—AUSTRALIA, 1925.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
Church of England	7,849	3,793	1,981	1,129	998	600	1	10	16,361
Roman Catholic	3,782	2,461	1,485	509	451	218	5	..	8,911
Methodist	2,169	1,883	1,063	1,317	376	281	14	1	7,104
Presbyterian	2,528	2,548	974	228	203	131	..	..	6,612
Congregational	384	901	135	199	77	45	..	..	1,741
Baptist	267	629	160	216	39	72	..	..	1,383
Church of Christ	155	318	31	184	37	45	..	..	770
Lutheran	30	58	141	182	4	..	..	..	415
Greek Catholic	23	5	9	3	4	..	..	..	44
Unitarian	10	83	..	2	..	..	..	..	95
Salvation Army	75	68	37	58	18	15	..	..	271
Seventh-Day Adventist	49	25	14	9	7	4	..	..	108
Other Christians	30	44	177	8	1	34	..	..	294
Hebrew	42	39	3	1	12	..	..	..	97
Registrar's Office	1,129	515	261	210	519	59	..	..	2,693
Total	18,522	13,370	6,471	4,255	2,746	1,504	20	11	46,899

(ii) *Number and Percentage in each Denomination, 1921 to 1925.* The number of marriages according to denomination, and the percentages on total marriages, are shown in the next table:—

MARRIAGES IN EACH DENOMINATION.—AUSTRALIA, 1921 TO 1925.

Denomination.		1921.	1922.	1923.	1924.	1925.
Church of England ..	Total	16,499	15,877	15,783	16,229	16,361
	%	35.20	35.49	35.43	35.38	34.89
Roman Catholic ..	Total	8,458	8,304	8,240	8,714	8,911
	%	18.05	18.57	18.50	19.00	19·00
Methodist	Total	7,320	6,904	6,965	6,919	7,104
	%	15.62	15.43	15.64	15.09	15.15
Presbyterian	Total	6,808	6,345	6,268	6,391	6,612
	%	14.52	14.18	14.07	13.93	14.10
Congregational ..	Total	2,001	1,773	1,694	1,697	1,741
	%	4.27	3.96	3.80	3.70	3.71
Baptist	Total	1,461	1,356	1,342	1,327	1,383
	%	3.12	3.03	3.01	2.89	2.95
Church of Christ ..	Total	870	768	720	740	770
	%	1.86	1.72	1.62	1.61	1.64
Lutheran	Total	401	422	390	405	415
	%	0.86	0.94	0.88	0.88	0.88
Greek Catholic ..	Total	23	34	47	59	44
	%	0.05	0.08	0.11	0.13	0.09
Unitarian	Total	21	18	17	19	95
	%	0.04	0.04	0.04	0.04	0.20
Salvation Army ..	Total	227	214	225	237	271
	%	0.48	0.48	0 51	0.52	0.58
Seventh-Day Adventist	Total	57	56	60	67	108
	%	0.12	0.13	0.13	0.15	0.23
Other Christians ..	Total	527	483	424	321	294
	%	1.12	1.08	0.95	0.70	0.63
Hebrew	Total	113	90	100	130	97
	%	0.24	0.20	0.22	0.28	0.21
Registrar's Office ..	Total	2,074	2,075	2,263	2,614	2,693
	%	4.43	4.64	5.08	5.70	5.74
Unspecified	Total	9	12	3	..	..
	%	0.02	0.03	0.01	..	..
		46,869	44,731	44,541	45,869	46,899

§ 3. Deaths.

1. Male and Female Deaths, 1921 to 1925.—The two following tables show the number of deaths registered in each year from 1921 to 1925 inclusive. The annual average of male deaths during the period was 30,751, and of female deaths 22,483, the details being as follow :—

MALE DEATHS, 1921 TO 1925.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1921 ..	11,490	8,662	4,397	2,655	2,209	1,166	70	3	30,652
1922 ..	11,014	8,187	4,372	2,537	1,994	1,084	52	5	29,245
1923 ..	11,969	9,135	4,699	2,727	1,907	1,140	35	10	31,622
1924 ..	11,887	8,863	4,440	2,644	2,039	1,177	42	11	31,103
1925 ..	11,944	8,582	4,581	2,729	2,157	1,081	51	9	31,134
Rate (*a*), 1925	10.30	10.32	10.19	9.83	10.92	10.17	19.71	2.96	10.28

(*a*) Number of deaths per 1,000 of annual mean male population.

FEMALE DEATHS, 1921 TO 1925.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1921 ..	8,536	7,503	2,745	2,327	1,271	1,031	10	1	23,424
1922 ..	8,152	6,968	2,780	2,071	1,173	913	8	1	22,066
1923 ..	9,079	8,084	3,194	2,234	1,023	997	3	..	24,614
1924 ..	8,948	7,640	2,887	2,226	1,224	946	2	4	23,877
1925 ..	8,878	7,255	2,964	2,250	1,158	915	11	3	23,434
Rate (*a*), 1925	7.96	8.64	7.38	8.45	6.79	8.54	10.05	1.78	8.07

(*a*) Number of deaths per 1,000 of mean female population.

2. **Male and Female Death Rates, 1925.**—The crude male and female death rates for 1925 only are given in the last line of the preceding tables. Western Australia had the highest and South Australia the lowest rate for males, and for the females Victoria had the highest and Western Australia the lowest rate. The rates for the two Territories are based on very small numbers, and comparisons with the States would be misleading.

Owing to differences in age constitution in the six States, the crude rates are not, however, strictly comparable. A more satisfactory rate is furnished by the "Index of Mortality" (see sub-para. 5). The death rates for males and females in each State in five-year age groups for the three years 1920 to 1922, that is, for the Census year and for the year immediately preceding and following, are shown in sub-section 9 hereafter,

The rates for the five years 1921–1925 averaged about 10.6 per 1,000 for males, and 8.4 per 1,000 for females.

MALE AND FEMALE DEATH RATES (*a*).—AUSTRALIA, 1921 TO 1925.

Year.	1921.	1922.	1923.	1924.	1925.
Male rate	11.05	10.33	10.91	10.50	10.28
Female rate	8.73	8.06	8.82	8.39	8.07
Crude total rate	9.91	9.22	9.89	9.47	9.20

(*a*) Number of deaths per 1,000 of mean population.

3. **Total Deaths, 1921 to 1925.**—The total number of deaths during each of the five years 1921 to 1925 is given below :—

TOTAL DEATHS, 1921 TO 1925.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1921 ..	20,026	16,165	7,142	4,982	3,480	2,197	80	4	54.076
1922 ..	19,166	15,155	7,152	4,608	3,167	1,997	60	6	51,311
1923 ..	21,048	17,219	7,893	4,961	2,930	2,137	38	10	56,236
1924 ..	20,835	16.503	7,327	4,870	3,263	2,123	44	15	54,980
1925 ..	20,822	15,837	7,545	4,979	3,315	1,996	62	12	54,568

4. Crude Death Rates, 1921 to 1925.—The crude death rates for the five years 1921 to 1925 are given in the next table.

CRUDE DEATH RATES (*a*), 1921 TO 1925.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1921 ..	9.50	10.52	9.36	10.02	10.43	10.30	20.48	1.61	9.91
1922 ..	8.92	9.65	9.16	9.11	9.32	9.30	16.42	2.13	9.22
1923 ..	9.61	10.71	9.83	9.59	8.41	9.92	10.53	3.02	9.89
1924 ..	9.35	10.05	8.88	9.19	9.08	9.89	12.21	3.90	9.47
1925 ..	9.16	9.47	8.86	9.15	9.00	9.35	16.84	2.54	9.20

(*a*) Number of deaths per 1,000 of annual mean population.

5. Index of Mortality.—(i) *General.*—The death rates so far quoted are crude rates, *i.e.*, they simply show the number of deaths per thousand of mean population, without taking the age constitution into consideration. Other conditions being equal, however, the death rate of a country will be lower if it contains a large percentage of young people (not infants). In order to obtain a comparison of the mortality of various countries on a uniform basis so far as age and age constitution is concerned, the standard population compiled by the International Institute of Statistics, according to age distribution (eleven age-groups) of the population of nineteen European countries at their censuses nearest to the year 1900 is used in the computation of the "Index of Mortality" as distinguished from the crude death rate.

(ii) *Sex and Age-Groups.* The distribution per 10,000 according to sex and ago in the eleven age-groups used in computation of the "Index of Mortality" is given in the following table :—

Age Group.	Males.	Females.
Under 1 year	132	130
1 to 4 years	469	467
5 ,, 14 ,, ...	1,037	1,032
15 ,, 24 ,, ...	905	927
25 ,, 34 ,, ...	725	755
35 ,, 44 ,, ...	593	613
45 ,, 54 ,, ...	454	485
55 ,, 64 ,, ...	337	371
65 ,, 74 ,, ...	187	218
75 ,, 84 ,, ...	64	81
85 years and over	7	11
Total	4,910	5,090

In computing an index the death rate is ascertained for each age-group for each sex and multiplied by the corresponding number in the above table, and the sum of the products so obtained is divided by 10,000. The result represents the "Index of Mortality."

(iii) *Comparison of Rates.* For the year 1925 on the basis of the crude rates there is a range of 0.59 per 1,000 persons between the lowest rate in Queensland (8.86) and the highest rate in Victoria (9.47), whereas the standardized rates increase the range to

1.24 per 1,000, i.e. between 9.43 in South Australia and 10.67 in Western Australia. In its application to the figures for 1925 the process of adjustment completely altered the relative positions of the various States from those determined by the crude rates. The principal changes were that South Australia from third position took the premier place from Queensland. Western Australia from second place fell to the lowest position, to the advantage of Victoria which was thus promoted from the lowest position on the basis of crude rates to the second position on the standardized basis.

(iv) *Years 1921 to 1925.* For purposes of comparison with previous years the index of mortality, based on the method alluded to in (ii) *ante*, is shown in the following table for each of the five years 1921 to 1925 :—

INDEX OF MORTALITY, 1921 TO 1925.

Year.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Federal Capital.	
1921 ..	10.36	10.79	10.23	10.38	11.89	10.84	13.74	1.89	10.58
1922 ..	9.79	9.85	10.15	9.39	10.91	9.81	11.05	2.59	9.89
1923 ..	10.61	10.97	10.97	9.90	9.79	10.49	7.37	2.60	10.64
1924 ..	10.31	10.31	9.90	9.50	10.82	10.43	9.56	4.43	10.20
1925 ..	10.13	9.74	9.94	9.43	10.67	9.94	15.52	2.58	9.93

6. **Death Rates of Various Countries.**—The following table gives particulars of the crude death rates of various countries for the latest available years :—

DEATH RATES (*a*).—VARIOUS COUNTRIES.

Country.	Year.	Crude Death Rate.	Country.	Year.	Crude Death Rate.
New Zealand	1925	7.8	Switzerland ..	1924	12.4
Queensland	1925	8.9	Great Britain ..	1924	12.6
Western Australia ..	1925	9.0	New York State ..	1925	12.7
South Australia ..	1925	9.2	Belgium	1925	13.1
New South Wales ..	1925	9.2	Scotland	1925	13.4
Australia	**1925**	**9.2**	Quebec (Canada) ..	1923	13.6
Tasmania	1925	9.4	Irish Free State ..	1925	13.8
			Austria	1924	14.9
Union of South Africa (Whites)	1925	9.4	Finland	1925	15.3
Victoria	1925	9.5	Northern Ireland ..	1925	15.7
			Czecho-Slovakia ..	1925	15.9
Canada (excluding Quebec)	1925	9.7	Italy	1924	16.6
Netherlands ..	1925	9.8	Hungary	1925	17.1
Norway	1925	10.9	France	1925	18.1
Denmark	1925	10.9	Spain	1925	19.4
Ontario (Canada) ..	1925	10.9	Bulgaria	1925	19.9
Sweden	1925	11.7	Japan	1924	21.2
			Jamaica	1924	21.8
United States (*b*) (Registration Area) ..	1925	11.7	Rumania	1923	22.4
Uruguay	1924	11.8	Russia (European) ..	1923	22.7
Germany	1925	11.9	Ceylon	1925	23.9
Prussia	1924	12.2	Chile	1925	29.8
England and Wales ..	1925	12.2	Egypt	1925	35.8

(*a*) Number of deaths per 1,000 of mean population. (*b*) Registration Area includes about 89 per cent. of the population.

7. Infantile Deaths and Death Rate.—(i) *Australia 1921 to 1925.* In the following table, which shows both the total number of deaths of children under one year and the rate per thousand live births since 1921, males and females are distinguished. The universal experience that during the first few years of life the higher death rate of male infants tends to counteract the excess of male births is confirmed by the fact that out of 348,328 male infants born from 1921 to 1925, 22,872 (64.23 per 1,000) died during their first year of life, while of 331,307 female infants only 16,967 (51.21 per 1,000) died during the first year.

INFANTILE DEATHS AND DEATH RATES.—AUSTRALIA, 1921 TO 1925.

Year.	Registered deaths under one year.			Rate of Infantile Mortality (*a*).		
	Males.	Females.	Total.	Males.	Females.	Australia.
1921	5,111	3,841	8,952	72.97	58.06	65.73
1922	4,279	2,972	7,251	60.62	44.42	52.74
1923	4,617	3,567	8,184	66.56	54.16	60.52
1924	4,276	3,425	7,701	62.15	51.79	57.08
1925	4,089	3,162	7,251	58.80	47.73	53.40

(*a*) Number of deaths under 1 year per 1,000 live births registered.

(ii) *States, 1921 to 1925.* For the States and Territories the rates of infantile mortality during the last five years were as follows :—

INFANTILE MORTALITY RATES (*a*), 1921 TO 1925.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1921 ..	62.56	72.55	54.16	65.48	78.26	78.02	63.29	74.07	65.73
1922 ..	53.60	53.35	50.38	47.50	55.59	55.70	57.14	31.25	52.74
1923 ..	60.68	65.70	53.95	60.30	56.02	57.45	13.89	..	60.52
1924 ..	58.93	61.32	51.30	51.33	49.87	54.99	35.09	48.78	57.08
1925 ..	54.95	56.98	45.21	46.09	56.57	55.19	30.77	106.38	53.40

(*a*) Number of deaths under 1 year per 1,000 live births registered.

The infantile mortality rate for Australia in 1922 was the lowest yet recorded, and was exceptionally low in all the states, South Australia occupying the most satisfactory position with a mortality of 47.50 per 1,000 births. Moreover, the death rate from almost every cause was light, though the greatest effect was from the comparatively low mortality from diarrhœa and enteritis, and from pneumonia and whooping cough. Although the rate for 1925 was not so satisfactory as for 1922, it was much below the average for the preceding four years. In 1925, Queensland had the lowest and Victoria the highest rate among the States.

(iii) *Districts.* The total number of births, of deaths of children under one year of age, and the average rate of infantile mortality for the five years 1921 to 1925 are shown in the following table for each of the fifty-nine districts for which the vital statistics have been tabulated. To afford a better indication of the geographical position of the districts the name of a town situated in a fairly central part of each district has been added. The figures for the Territories and for Lord Howe Island are included for the sake of completeness, but are too small to be used in comparison with others. Remarkable variations are shown in the mortality rate for the various districts. The lowest rate was experienced in the Wide Bay District of Queensland (41.48 per 1,000 births), and the highest in the Trans-Darling Plains (Broken Hill) of New South Wales (107.30 per 1,000 births).

INFANTILE MORTALITY.—STATE DISTRICTS, 1921 TO 1925.

States and Territories.	Districts.	Towns.	Total Births, 1921–25.	Total Deaths of Children under one year, 1921–25.	Average Infantile Mortality per 1,000 Births, 1921–25.
New South Wales	Metropolitan	Sydney	113,367	6,741	59.46
„	North Coast	Grafton	22,568	1,061	47.01
„	Lower Hunter	Newcastle	30,284	1,897	62.64
„	Cumberland	Parramatta	15,756	697	44.24
„	South Coast	Nowra	9,963	560	56.21
„	Northern Tableland	Armidale	12,711	624	49.09
„	Central Tableland	Bathurst	16,163	1,045	64.65
„	Southern Tableland	Goulburn	13,672	854	62.46
„	North-Western Slope	Moree	5,326	316	59.33
„	Central-Western Slope	Dubbo	9,438	523	55.41
„	South-Western Slope	Temora	11,136	588	52.80
„	Riverina	Hay	6,524	382	58.55
„	Plains East of Darling	Cobar	1,461	119	81.45
„	Trans-Darling Plains	Broken Hill	3,821	410	107.30
„	Lord Howe Island	—	5	1	200.00
Victoria	Metropolitan	Melbourne	95,254	6,271	65.82
„	Central	Geelong	17,359	1,110	63.94
„	North-Central	Kyneton	5,901	333	56.43
„	Western	Hamilton	17,583	1,018	57.90
„	Wimmera	Horsham	7,160	413	57.68
„	Mallee	Ultima	7,423	486	65.47
„	Northern	Rochester	16,078	908	56.47
„	North-Eastern	Beechworth	4,541	212	46.69
„	Gippsland	Sale	8,519	386	45.31
Queensland	Metropolitan	Brisbane	31,261	1,776	56.81
„	Moreton	Ipswich	10,565	451	42.69
„	Wide Bay	Maryborough	12,296	510	41.48
„	Port Curtis	Rockhampton	7,699	424	55.07
„	Edgecumbe	Townsville	9,640	488	50.62
„	Rockingham	Cairns	6,294	268	42.58
„	York Peninsula	Cooktown	1,050	69	65.71
„	Carpentaria	Croydon	1,479	88	59.50
„	Central-Western	Winton	524	28	53.44
„	South-Western	Charleville	1,362	101	74.16
„	Central	Blackall	3,169	169	53.33
„	Maranoa	Roma	1,682	79	46.97
„	Downs	Toowoomba	13,268	663	49.97
South Australia	Metropolitan	Adelaide	29,747	1,811	60.88
„	Central	Gawler	11,816	515	43.59
„	Lower North	Redruth	8,939	480	53.70
„	Upper North	Port Augusta	2,893	144	49.78
„	South-Eastern	Mount Gambier	2,847	114	40.04
„	Western	Port Lincoln	2,474	118	47.70
Western Australia	Metropolitan	Perth	21,028	1,335	63.49
„	Northern Agricultural	Geraldton	5,402	269	49.80
„	South-Western	Katanning	10,398	532	51.16
„	Eastern Goldfields	Kalgoorlie	2,657	186	70.00
„	Northern Goldfields	Pilbara	419	34	81.15
„	North-Western	Roebourne	206	10	48.54
„	Northern	Broome	168	16	95.24
Tasmania	Metropolitan	Hobart	7,864	539	68.54
„	Launceston	Launceston	4,292	287	66.87
„	North-Eastern	Scottsdale	2,456	140	57.06
„	North-Western	Stanley	7,270	411	56.53
„	Midland	Zeehan	2,493	123	49.34
„	South-Eastern	Sorell	2,847	147	51.63
„	South-Western	Franklin	608	35	57.57
Northern Territory		Darwin	343	14	40.82
Federal Capital Territory		Canberra	166	10	60.24

(iv) *Various Countries and Cities.* Compared with other countries, the States of Australia occupy a very favourable position, being surpassed by New Zealand and Norway only. There are, however, several continental cities which show better results than the record for any Australian city. A study of the respective rates shows that a high birth rate is often, though not invariably, accompanied by a high infantile death rate.

INFANTILE MORTALITY RATES (*a*).—VARIOUS COUNTRIES.

Country.	Year.	Rate of Infantile Mortality. (*a*)	Crude Birth Rate. (*b*)	Country.	Year.	Rate of Infantile Mortality. (*a*)	Crude Birth Rate. (*b*)
New Zealand	1925	40	21.2	Denmark	1925	81	21.1
Queensland	1925	45	23.8	Northern Ireland	1925	86	22.0
South Australia	1925	46	21.1	France	1925	89	19.6
Norway	1923	49	23.0	Belgium	1924	90	19.9
Australia	**1925**	**53**	**22.9**	Scotland	1925	91	21.3
New South Wales	1925	55	24.0	Uruguay	1923	104	25.4
Tasmania	1925	55	24.4	Germany	1925	105	20.6
Sweden	1925	55	17.5	Prussia	1924	106	20.8
Victoria	1925	57	21.5	Finland	1925	107	22.4
Western Australia	1925	57	22.2	Italy	1923	128	29.3
Netherlands	1924	61	25.1	Austria	1924	128	21.4
Switzerland	1923	61	19.4	Quebec (Canada)	1923	131	32.3
New York State	1925	68	20.6	Spain	1924	143	29.7
				Czecho-Slovakia	1925	146	25.7
Union of South Africa (Whites)	1925	68	26.5	Japan	1924	156	33.8
Irish Free State	1924	71	20.1	Bulgaria	1925	156	31.3
				Hungary	1925	168	29.1
United States (Registration Area)	1925	72	21.2	Ceylon	1925	172	39.2
England and Wales	1925	75	18.3	Jamaica	1922	177	37.3
Great Britain	1924	78	19.3	Rumania	1923	207	36.6
Ontario (Canada)	1925	79	22.6	Egypt	1925	237	48.8
				Russia, European	1909	248	44.0
Canada (excluding Quebec)	1925	79	22.6	Chile	1924	266	39.9

(*a*) Number of deaths under 1 year per 1,000 births registered. (*b*) Number of births per 1,000 of mean population.

INFANTILE MORTALITY RATES (*a*).—VARIOUS CITIES.

City.	Year.	Rate of Infantile Mortality. (*a*)	City.	Year.	Rate of Infantile Mortality. (*a*)
Wellington	1925	35	Washington	1925	88
Amsterdam	1925	36	Paris	1925	89
Oslo	1925	43	Manchester	1925	92
Stockholm	1925	43	Edinburgh	1925	96
Christchurch	1925	48	Liverpool	1925	98
Adelaide	1925	49	Vienna	1924	99
Brisbane	1925	50	Cologne	1925	100
Auckland	1925	51	Berlin	1925	102
Newcastle, N.S.W.	1925	53	Glasgow	1925	102
San Francisco	1925	56	Belfast	1925	104
Sydney	1925	57	Leipzig	1925	104
Melbourne	1925	60	Munich	1925	105
New York	1925	65	Breslau	1925	106
Perth	1925	66	Brussels	1924	108
London	1925	67	Aberdeen	1925	109
Hobart	1925	68	Prague	1924	110
Copenhagen	1925	68	Dublin	1925	111
Chicago	1925	75	Buda Pest	1925	121
Birmingham	1925	75	Lodz	1922	156
Toronto	1923	77	Warsaw	1925	158
Detroit	1925	77	Montreal	1922	163
Philadelphia	1925	77	São Paulo	1925	176
Antwerp	1925	79	Colombo	1924	240
Hamburg	1925	81	Madras	1925	274
Dresden	1925	81	Bombay	1925	356

(*a*) Number of deaths under 1 year per 1,000 births registered.

(v) *Causes of Deaths of Children under one Year.* The following table gives for twenty-six causes the ages of all children who died under one year of age. Particulars for males and females may be found in Bulletin No. 43 of "Australian Demography."

CAUSES OF DEATHS OF CHILDREN UNDER ONE YEAR.—AUSTRALIA, 1925.

Age at Death.	Measles.	Whooping Cough.	Diphtheria.	Erysipelas.	Meningococcal Meningitis.	Pulmonary Tuberculosis.	Tubercular Meningitis.	Tuberculosis, other forms.	Syphilis.	Meningitis.	Convulsions.	Acute Bronchitis.	Broncho-Pneumonia.
Under 1 week	..	3	..	..	..	..	..	..	2	1	54	6	16
1 week and under 2 weeks	..	2	..	..	1	..	..	..	1	8	13	6	13
2 weeks ,, 3 ,,	1	3	1	..	..	..	..	..	1	..	4	10	15
3 ,, ,, 1 month	..	14	1	..	..	..	..	..	5	3	6	6	21
1 month ,, 2 months	2	40	3	1	1	..	..	..	4	8	10	18	77
2 months ,, 3 ,,	5	56	1	8	..	..	..	..	3	6	9	18	61
3 ,, ,, 4 ,,	..	51	..	1	3	1	1	4	4	3	5	9	36
4 ,, ,, 5 ,,	3	22	2	1	2	..	2	2	3	9	1	4	51
5 ,, ,, 6 ,,	1	15	1	2	..	1	3	1	3	5	7	4	25
6 ,, ,, 7 ,,	1	26	..	..	1	1	4	..	2	6	1	6	34
7 ,, ,, 8 ,,	3	17	3	2	4	..	4	1	1	7	3	5	26
8 ,, ,, 9 ,,	2	11	5	..	7	1	2	2	1	4	2	6	22
9 ,, ,, 10 ,,	..	16	9	..	1	1	2	3	..	2	1	4	28
10 ,, ,, 11 ,,	1	14	1	3	1	1	1	1	2	4	..	..	28
11 ,, ,, 1 year	2	18	3	1	2	..	8	2	2	6	1	3	25
Total under 1 year ..	21	308	30	19	23	6	27	16	34	72	117	105	478
Infantile Mortality (*a*) ..	0.16	2.27	0.22	0.14	0.17	0.04	0.20	0.12	0.25	0.53	0.86	0.77	3.52
Ex-nuptial deaths under 1 year included in above	1	13	2	1	3	..	2	..	8	2	15	3	51
Infantile Mortality (*b*) ..	0.16	2.06	0.32	0.16	0.48	..	0.32	..	1.27	0.32	2.38	0.48	8.09

Age at Death.	Pneumonia.	Pleurisy.	Diseases of Stomach.	Diarrhœa and Enteritis.	Hernia.	Intestinal Obstruction.	Malformations.	Congenital Debility, Icterus and Sclerema.	Premature Birth.	Injury at Birth.	Other Diseases peculiar to Early Infancy.	Lack of Care.	Other Causes.	Total.
Under 1 week	10	..	..	3	..	4	258	290	1,547	282	335	12	63	2,886
1 week and under 2 weeks	7	..	..	19	..	1	65	100	177	34	45	..	29	521
2 weeks ,, 3 ,,	6	..	3	14	..	1	35	59	107	14	25	..	19	318
3 ,, ,, 1 month	8	..	..	18	1	2	23	26	71	2	11	..	16	234
1 month ,, 2 month	22	..	10	70	1	1	43	90	78	5	15	1	37	537
2 months ,, 3 ,,	29	..	7	108	..	4	35	62	24	1	4	..	30	471
3 ,, ,, 4 ,,	22	..	7	140	..	6	23	35	8	1	..	..	24	384
4 ,, ,, 5 ,,	15	..	5	111	..	6	15	18	5	..	..	..	33	310
5 ,, ,, 6 ,,	21	..	6	124	..	7	12	19	3	..	..	..	20	280
6 ,, ,, 7 ,,	16	..	1	103	1	9	12	14	..	..	..	..	34	272
7 ,, ,, 8 ,,	20	..	5	86	..	6	6	6	1	..	..	..	18	224
8 ,, ,, 9 ,,	12	..	..	83	..	7	4	5	..	..	..	..	30	206
9 ,, ,, 10 ,,	23	..	1	83	..	5	4	2	1	..	..	..	30	216
10 ,, ,, 11 ,,	19	3	2	79	..	2	2	7	..	..	..	..	31	202
11 ,, ,, 1 year	14	2	5	51	..	1	5	7	1	..	..	..	31	190
Total under 1 year ..	244	5	52	1092	3	62	542	740	2,023	339	435	13	445	7,251
Infantile Mortality (*a*) ..	1.80	0.04	0.38	8.04	0.02	0.46	3.99	5.45	14.90	2.50	3.20	0.10	3.27	53.40
Ex-nuptial deaths under 1 year included in above	15	..	7	121	..	3	23	60	132	12	17	7	37	535
Infantile mortality (*b*) ..	2.38	..	1.11	19.18	..	0.47	3.64	9.51	20.93	1.90	2.69	1.11	5.87	84.83

(*a*) Rate per 1,000 total births. (*b*) Rate per 1,000 ex-nuptial births.

Pre-natal influences, such as malformations, congenital debility, and premature birth, together with injuries at birth, accounted for 3,644, or 50 per cent., of all deaths under one year; and of these 3,644 deaths, 2,377, or 65 per cent., occurred within a week of birth. Among the survivors of the first week, diarrhœa and enteritis had the most fatal effects. These diseases were responsible for 1,092 deaths, representing 15 per cent. of all deaths under one year, or 8.04 per 1,000 births. Excluding deaths from pre-natal causes already referred to, over 42 per cent. of the deaths between three months and one year of age were due to diarrhœa and enteritis.

(vi) *Deaths of Ex-nuptial Children under one Year.* The deaths of ex-nuptial children were tabulated by this Bureau for the first time in 1925. The causes of death of these children are shown as an addendum to the preceding table.

Pre-natal influences such as malformations, congenital debility, premature birth, and injuries from birth accounted for 227, or 42 per cent., and diarrhœa and enteritis for 121, or 22 per cent., of the total deaths.

8. **Deaths in Age-Groups, 1921 to 1925.**—A distribution into age-groups has been made of the 271,171 deaths which occurred in Australia from 1921 to 1925, and the results have been tabulated for each State. It is, however, sufficient to show here the results for Australia as a whole, which are as follows :—

DEATHS IN AGE GROUPS.—AUSTRALIA, 1921 TO 1925.

Age-Group.	Males.	Females.	Total.	Percentage on Total Males.	Percentage on Total Females.	Percentage on Total.
Under 1 year ..	22,372	16,967	39,339	14.55	14.45	14.51
1 year and under 5 ..	7,161	5,931	13,092	4.66	5.05	4.83
5 years and under 20 ..	7,649	6,042	13,691	4.97	5.15	5.05
20 years and under 40	17,399	16,623	34,022	11.32	14.16	12.55
40 years and under 60	33,610	22,009	55,619	21.86	18.75	20.51
60 years and under 65	14,000	8,328	22,328	9.10	7.09	8.23
65 years and over ..	51,323	41,474	92,797	33.38	35.32	34.22
Age unspecified ..	242	41	283	0.16	0.03	0.10
Total ..	153,756	117,415	271,171	100.00	100.00	100.00

9. **Deaths at Single Ages and in Age-Groups, 1925.**—(i) *General.* The 54,568 deaths registered in Australia in the year 1925 will be found tabulated under single years, and in groups of five years for each State and Territory, in Bulletin No. 43 "Australian Demography, 1925." The deaths during the first two years of life have been tabulated in shorter periods. A summary for Australia is given in the following table :—

DEATHS AT SINGLE AGES AND IN AGE-GROUPS.—AUSTRALIA, 1925.

Ages.	Males.	Females.	Total.
Total under 1 month ..	2,273	1,686	3,959
,, 1 month and under 3	568	440	1,008
,, 3 months and under 6	542	432	974
,, 6 months and under 12	706	604	1,310
Total under 1 year ..	4,089	3,162	7,251
1 year and under 2 ..	637	539	1,176
2 years	248	219	467
3 ,, ...	171	166	337
4 ,, ...	154	142	296
Total under 5 years ..	5,299	4,228	9,527
Total 5–9 years ..	527	367	894
,, 10–14 ,, ..	406	294	700
,, 15–19 ,, ..	591	431	1,022
Total 20–24 years ..	684	638	1,322
,, 25–29 ,, ..	740	737	1,477
,, 30–34 ,, ..	895	850	1,745
,, 35–39 ,, ..	1,176	963	2,139
,, 40–44 ,, ..	1,249	960	2,209
,, 45–49 ,, ..	1,490	981	2,471
,, 50–54 ,, ..	1,835	1,130	2,965
,, 55–59 ,, ..	2,278	1,346	3,624
,, 60–64 ,, ..	2,939	1,755	4,694
,, 65–69 ,, ..	3,108	1,973	5,081
,, 70–74 ,, ..	2,684	1,875	4,559
,, 75–79 ,, ..	2,193	1,836	4,029
,, 80–84 ,, ..	1,703	1,667	3,370
,, 85–89 ,, ..	885	937	1,822
,, 90–94 ,, ..	326	347	673
,, 95–99 ,, ..	92	106	198
,, 100 and over ..	11	10	21
Age Unspecified ..	23	3	26
Total All Ages ..	31,134	23,434	54,568

(ii) *Rates.* The following tables give the death rate per 1,000 living at each age for the three years 1920, 1921, and 1922, i.e., the Census year 1921, and the years immediately preceding and following. The Northern Territory is included with South Australia, and the Federal Capital Territory with New South Wales :—

AVERAGE ANNUAL DEATH RATES.—AGE-GROUPS, 1920 TO 1922.

Age-Group.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
			MALES.				
0 to 4 years ..	21.49	22.61	20.73	20.01	23.88	20.72	21.64
5 ,, 9 ,, ..	1.85	2.15	1.96	2.25	2.24	2.04	2.02
10 ,, 14 ,, ..	1.59	1.61	1.58	1.56	1.42	1.83	1.59
15 ,, 19 ,, ..	2.16	2.07	2.90	2.42	2.37	2.66	2.30
20 ,, 24 ,, ..	2.74	3.06	3.54	3.33	3.96	3.23	3.10
25 ,, 29 ,, ..	3.36	3.60	4.37	3.64	4.08	5.05	3.70
30 ,, 34 ,, ..	4.13	3.70	4.58	4.00	5.40	4.59	4.16
35 ,, 39 ,, ..	5.36	5.32	5.95	5.18	6.42	4.79	5.48
40 ,, 44 ,, ..	7.85	6.60	7.86	6.20	7.90	5.98	6.89
45 ,, 49 ,, ..	9.61	9.80	10.60	8.81	12.09	8.71	9.91
50 ,, 54 ,, ..	12.38	12.24	14.23	11.76	17.18	11.51	12.90
55 ,, 59 ,, ..	18.72	18.24	20.34	19.70	23.76	13.44	19.04
60 ,, 64 ,, ..	28.35	28.48	30.36	25.63	34.19	23.95	28.71
65 ,, 69 ,, ..	43.00	44.38	44.93	42.31	49.51	38.53	43.74
70 ,, 74 ,, ..	65.81	65.16	64.56	62.01	72.15	53.55	64.88
75 ,, 79 ,, ..	105.54	107.84	103.32	106.23	115.56	109.46	106.53
80 ,, 84 ,, ..	159.12	163.74	159.06	161.73	184.49	132.47	160.73
85 ,, 89 ,, ..	271.79	266.12	227.79	226.87	283.46	232.39	259.17
90 and over ..	368.58	387.01	314.96	387.09	566.67	350.00	376.08
			FEMALES.				
0 to 4 years ..	16.92	17.91	16.05	16.25	18.80	16.74	17.09
5 ,, 9 ,, ..	1.66	1.95	1.89	2.27	1.28	2.09	1.82
10 ,, 14 ,, ..	1.21	1.20	1.43	1.34	1.23	1.63	1.27
15 ,, 19 ,, ..	1.63	2.00	1.99	2.72	1.34	2.58	1.90
20 ,, 24 ,, ..	2.43	2.92	2.81	2.85	3.07	3.74	2.75
25 ,, 29 ,, ..	3.47	3.55	3.61	3.85	3.99	3.87	3.59
30 ,, 34 ,, ..	3.85	4.13	4.11	4.21	4.60	4.41	4.06
35 ,, 39 ,, ..	4.64	4.98	5.80	5.18	4.90	5.98	5.00
40 ,, 44 ,, ..	5.15	5.74	6.03	4.98	6.39	5.48	5.51
45 ,, 49 ,, ..	6.71	6.91	6.76	6.40	8.12	7.31	6.87
50 ,, 54 ,, ..	9.35	9.11	9.11	9.10	10.62	8.61	9.27
55 ,, 59 ,, ..	13.17	12.87	13.60	10.85	12.81	14.23	12.92
60 ,, 64 ,, ..	19.08	19.06	19.71	18.27	17.78	20.13	19.05
65 ,, 69 ,, ..	31.59	31.69	30.81	32.89	30.49	34.72	31.76
70 ,, 74 ,, ..	50.24	51.83	50.61	45.65	54.20	49.42	50.43
75 ,, 79 ,, ..	88.19	88.52	88.10	83.98	96.43	80.32	87.81
80 ,, 84 ,, ..	140.29	143.71	126.40	132.25	137.07	126.00	138.32
85 ,, 89 ,, ..	225.11	231.45	210.65	193.54	219.51	208.79	221.44
90 and over ..	380.95	321.79	288.89	337.50	478.26	352.94	341.68
			PERSONS.				
0 to 4 years ..	19.24	20.30	18.45	18.17	21.39	18.75	19.40
5 ,, 9 ,, ..	1.76	2.05	1.93	2.26	1.76	2.07	1.92
10 ,, 14 ,, ..	1.40	1.40	1.51	1.45	1.33	1.73	1.43
15 ,, 19 ,, ..	1.90	2.03	2.45	2.57	1.86	2.62	2.10
20 ,, 24 ,, ..	2.58	2.99	3.17	3.09	3.52	3.49	2.92
25 ,, 29 ,, ..	3.42	3.57	4.00	3.75	4.03	4.43	3.64
30 ,, 34 ,, ..	3.99	3.92	4.37	4.10	5.03	4.50	4.11
35 ,, 39 ,, ..	5.03	5.14	5.88	5.18	5.72	5.39	5.24
40 ,, 44 ,, ..	5.99	6.16	7.04	5.60	7.23	5.73	6.22
45 ,, 49 ,, ..	8.21	8.30	8.89	7.62	10.41	8.04	8.44
50 ,, 54 ,, ..	10.97	10.67	12.04	10.46	14.58	10.16	11.20
55 ,, 59 ,, ..	16.19	15.60	17.57	15.32	19.61	13.80	16.22
60 ,, 64 ,, ..	24.11	23.93	25.99	22.13	27.90	22.13	24.22
65 ,, 69 ,, ..	37.81	37.90	39.23	37.80	41.71	36.73	38.17
70 ,, 74 ,, ..	58.34	58.09	58.64	53.85	64.31	51.54	57.82
75 ,, 79 ,, ..	97.02	97.07	96.41	94.82	106.68	93.60	96.98
80 ,, 84 ,, ..	149.75	152.49	144.74	145.42	162.58	128.81	149.09
85 ,, 89 ,, ..	248.05	246.87	219.48	206.49	252.00	219.14	238.91
90 and over ..	374.81	349.09	304.15	355.73	528.30	351.64	357.36

The high death rate for children under five years of age rapidly diminishes until, at ages 10 to 14, it stands at 1.43 per 1,000, which is the lowest at any age. The rate thereafter gradually rises with increasing age until, at the ages 90 and over, more than one-third die every year.

10. Deaths of Centenarians, 1925.—Particulars concerning the twenty-one persons —eleven males and ten females—who died in 1925 aged 100 years and upwards, are given in the following table. While the Registrars-General of the various States verify the figures as far as possible, absolute reliance cannot be placed on their accuracy, owing to the well-known tendency of very old people to overstate their ages. In connexion with this question it may be noted that while parish registers in the United Kingdom often date very far back, compulsory registration of births dates practically from 1874 only, the Act of 1836 having left many loop-holes open for those unwilling to register the births of their children.

DEATHS OF CENTENARIANS.—AUSTRALIA, 1925.

Age.	Locality where Death occurred.	State.	Cause of Death.	Occupation.	Birthplace.	Length of Residence in Australia.	Conjugal Condition.
			MALES.				
109	Granville ..	N.S.W. ..	Senility ..	Labourer..	At sea ..	Not stated	Married
106	,, ..	,, ..	Hemiplegia	,,	Not stated	43 years ..	Single
105	Launceston	Tasmania	Senility ..	Pensioner	England ..	Not stated	Not stated
104	Eden ..	N.S.W. ..	,, ..	Storekeeper	,, ..	75 years ..	Married
101	Balwyn ..	Victoria ..	,, ..	Not stated	Scotland	85 years ..	,,
100	Boorowa ..	N.S.W. ..	Myocarditis	Wheelwright	England ..	73 years ..	,,
100	Gunnedah	,, ..	Senility ..	Not stated	Not stated	Not stated	Not stated
100	Bowraville	,, ..	Bronchitis..	Farmer ..	Ireland ..	73 years ..	Married
100	Dromana ..	Victoria ..	Senility ..	Fisherman	Greece ..	50 years ..	,,
100	Norwood ..	Sth. Aust.	,, ..	Chemist ..	England ..	69 years ..	Not stated
100	Sorell ..	Tasmania	,, ..	Farmer ..	Tasmania	Native ..	Married
			FEMALES.				
107	Moama ..	N.S.W. ..	Senility ..	.. ..	Tasmania	Native ..	Married
104	Bundaberg	Queensland	,, ..	.. ..	England ..	51 years ..	,,
103	Hunter's Hill	N.S.W. ..	,, ..	.. ..	Scotland	100 years	Single
103	Kapunda ..	Sth. Aust.	,, ..	.. ..	Ireland ..	72 years ..	Married
102	Woollahra..	N.S.W. ..	,, ..	.. ..	N.S.W. ..	Native ..	,,
102	Northam ..	W.Australia	Fracture of hip	.. ..	Scotland	30 years ..	,,
102	Hobart ..	Tasmania	Diabetes Mellitus	.. ..	England ..	99 years ..	Single
101	Box Hill ..	Victoria ..	Senilty ..	.. ..	Scotland	75 years ..	Married
100	Randwick..	N.S.W. ..	,, ..	.. ..	Ireland ..	83 years ..	,,
100	Garfield ..	Victoria ..	,, .	.. ..	Scotland	52 years ..	,,

11. Length of Residence in Australia of Persons who died in 1925.—The length of residence in Australia of all persons whose deaths were registered in the year 1925 is shown in the following table :—

LENGTH OF RESIDENCE IN AUSTRALIA OF PERSONS WHO DIED IN 1925.

Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.	Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.
Born in Australia	19,833	16,185	36,018	Resident 25 to 29 years	317	161	478
Resident under 1 year	140	39	179	,, 30 to 34 ,,	569	249	818
,, 1 year	94	47	141	,, 35 to 39 ,,	740	483	1,223
,, 2 years	102	59	161	,, 40 to 44 ,,	1,499	756	2,255
,, 3 ,,	97	40	137	,, 45 to 49 ,,	812	467	1,279
,, 4 ,,	56	48	104	,, 50 to 54 ,,	794	551	1,345
,, 5 ,,	65	63	128	,, 55 to 59 ,,	469	387	856
,, 6 ,,	26	28	54	,, 60 to 64 ,,	844	727	1,571
,, 7 ,,	18	10	28	,, 65 yrs. and over	1,554	1,851	3,405
,, 8 ,,	22	13	35	Length of residence not stated	1,706	492	2,198
,, 9 ,,	19	19	38				
,, 10 to 14 years	665	422	1,087				
,, 15 to 19 ,,	379	195	574				
,, 20 to 24 ,,	314	142	456	Total	31,134	23,434	54,568

12. **Birthplaces of Persons who Died in 1925.**—The following table gives the birthplaces of persons whose deaths were registered in 1925. More detailed information will be found in "Australian Demography," Bulletin No. 43.

BIRTHPLACES OF PERSONS WHO DIED IN 1925.—AUSTRALIA.

Birthplace.	Males.	Females.	Persons.	Birthplace.	Males.	Females.	Persons.
AUSTRALASIA—				ASIA—			
New South Wales	7,335	6,187	13,522	British India and Ceylon	97	23	120
Victoria	6,472	5,089	11,561	China	243	2	245
Queensland	2,063	1,638	3,701	Japan	28	..	28
South Australia	2,118	1,740	3,858	Other Asiatic Countries	58	8	66
Western Australia	650	478	1,128				
Tasmania	1,189	1,042	2,231				
Northern Territory	3	7	10				
Federal Capital Territory	3	4	7	AFRICA—			
New Zealand	214	156	370	Union of Sth. Africa	29	15	44
				Other African Countries	13	7	20
EUROPE—				AMERICA—			
England and Wales	5,192	3,580	8,772	Canada	46	20	66
Scotland	1,391	900	2,291	United States of America	79	27	106
Ireland	1,928	1,847	3,775	Other American Countries	33	10	43
Other Brit. Possessions in Europe	42	20	62				
Austria	11	..	11				
Denmark	134	39	173				
Finland	42	3	45				
France	52	19	71				
Germany	432	261	693	POLYNESIA—			
Greece	43	6	49	Other Polynesian Islands	48	13	61
Italy	128	25	153				
Netherlands	10	6	16				
Norway	67	9	76				
Poland	49	11	60				
Russia	43	15	58				
Sweden	111	12	123				
Switzerland	30	11	41	At Sea	65	51	116
Other European Countries	35	6	41	Unspecified	608	147	755
				Total Deaths	31,134	23,434	54,568

13. Occupations of Males who Died in 1925.—(i) *Australia, 1925.* Information as to the main groups of the occupations of the 31,134 males who died in Australia in 1925 is contained in the following table :—

OCCUPATIONS OF MALES WHO DIED IN 1925.—AUSTRALIA.

Occupations.	No. of Deaths.	Occupations.	No. of Deaths.
CLASS I.—PROFESSIONAL.		CLASS V.—INDUSTRIAL.	
Government, Defence, Law ..	521	Art and Mechanic productions ..	1,077
Others	857	Textiles and fibrous materials ..	489
		Food and drinks	308
Total Class I.	1,378	Animal and vegetable substances	84
		Metals and minerals	591
		Fuel, light and energy	112
		Building and construction ..	1,386
		Others	5,508
CLASS II.—DOMESTIC.			
		Total Class V.	9,555
Board and lodging	498		
Others	342		
Total Class II.	840		
		CLASS VI.—AGRICULTURAL, PASTORAL, MINING, ETC.	
CLASS III.—COMMERCIAL.		Agricultural	3,479
		Pastoral	1,070
Property and finance	314	Mining and quarrying	1,281
Art, mechanic and textile products	219	Others	271
Food and drinks	608		
Animal and vegetable substances	109	Total Class VI.	6,101
Fuel, light and metals	63		
Merchants and dealers ..	611		
Others	1,143		
Total Class III. ..	3,067		
		CLASS VII.—INDEFINITE.	
		Independent means	682
		Occupation unspecified ..	857
CLASS IV.—TRANSPORT AND COMMUNICATION.		Total Class VII.	1,539
Railway traffic	574		
Road and tramway traffic ..	713		
Sea and River traffic	655		
Others	160	CLASS VIII.—DEPENDENTS ..	6,552
Total Class IV.	2,102	Total Male Deaths ..	31,134

(ii) *Australia, 1921 to 1925.* The male deaths in Australia grouped according to the main classes of occupations, and the percentage of each class on the total male deaths for the five years 1921 to 1925, are shown in the table hereunder :—

OCCUPATIONS OF MALES WHO DIED IN AUSTRALIA, 1921 TO 1925.

Occupation.		1921.	1922.	1923.	1924.	1925.
Class						
I. Professional ..	Total	1,307	1,317	1,339	1,327	1,378
	Per cent.	4.26	4.50	4.23	4.27	4.43
II. Domestic ..	Total	830	745	803	802	840
	Per cent.	2.71	2.55	2.54	2.58	2.70
III. Commercial ..	Total	2,739	2,871	2,914	3,063	3,067
	Per cent.	8.94	9.82	9.22	9.85	9.85
IV. Transport and communication	Total	1,841	1,842	1,931	2,041	2,102
	Per cent.	6.01	6.30	6.11	6.56	6.75
V. Industrial ..	Total	8,613	8,592	9,509	9,510	9,555
	Per cent.	28.10	29.38	30.07	30.57	30.69
VI. Agricultural, Pastoral, Mining, etc.	Total	5,711	5,664	5,902	5,959	6,101
	Per cent.	18.63	19.37	18.66	19.16	19.60
VII. Indefinite ..	Total	1,436	1,378	1,866	1,431	1,539
	Per cent.	4.68	4.71	5.90	4.60	4.94
VIII. Dependents ..	Total	8,175	6,836	7,358	6,970	6,552
	Per cent.	26.67	23.37	23.27	22.41	21.04
Total		30,652	29,245	31,622	31,103	31,134

14. **Causes of Death.**—(i) *General.* The classification adopted by the Commonwealth Bureau of Census and Statistics is that of the International Institute of Statistics, as amended by the Committees of Revision which met in 1909 and 1920. The detailed classification groups causes of death under 205 different headings, in fifteen categories, as follows :—

i. Epidemic, Endemic, and Infectious Diseases.
ii. General Diseases not included in (i).
iii. Diseases of the Nervous System and Organs of Sense.
iv. Diseases of the Circulatory System.
v. Diseases of the Respiratory System.
vi. Diseases of the Digestive System.
vii. Diseases of the Genito-urinary System and Adnexa.
viii. Puerperal Condition.
ix. Diseases of the Skin and Cellular Tissue
x. Diseases of the Organs of Locomotion.
xi. Malformations.
xii. Early Infancy.
xiii. Old Age.
xiv. External Causes.
xv. Ill-defined Diseases.

(ii) *Mortality Statistics for 1907 and Subsequent Years.* The statistics relating to causes of death in Australia from the year 1907 onward have been tabulated in the Commonwealth Bureau of Census and Statistics in accordance with the above-mentioned classification, and the system is being employed also in the various State statistical offices.

(iii) *Classification of Causes of Death, 1921 to 1925, according to Abridged International Classification.* An abridged classification, which enumerates thirty-eight diseases and groups of diseases according to the revised classification, is in use in many European countries and American States, and a table has been prepared showing the causes of death according to the abridged classification, so that the results may be compared with those of countries which use the abridged index.

The compilations for the years 1921 to 1925 will be found in full in Bulletins Nos. 39 to 43 of "Australian Demography." In the following tables showing deaths of males, females, and persons for the year 1925, the abridged classification has been employed.

CAUSES OF DEATH.—MALES, 1925.

Cause.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
1 Typhoid Fever ..	58	15	25	7	7	1	..	..	113
2 Typhus Fever ..	..	..	1	1	..	..	..	..	2
3 Malaria	..	1	18	..	3	1	2	..	25
4 Small-pox	..	..	..	..	..	..	..	..	..
5 Measles	13	23	2	28	..	..	..	..	66
6 Scarlet Fever ..	9	6	2	..	..	1	..	..	18
7 Whooping Cough ..	135	20	30	3	7	17	..	1	213
8 Diphtheria	61	36	24	10	2	6	1	..	140
9 Influenza—Pneumonic	43	27	22	1	12	1	..	..	106
9*a* Influenza—other ..	30	10	25	2	9	1	..	1	78
10 Asiatic Cholera ..	..	..	..	..	..	..	..	..	..
11 Cholera Nostras ..	..	..	..	..	..	..	..	..	..
12 Other Epidemic Diseases	79	73	37	16	16	7	..	..	228
13 Tuberculosis of the Respiratory System	615	529	205	174	179	57	10	..	1,769
14 Tuberculosis of the Meninges	26	33	1	7	6	4	..	..	77
15 Other forms of Tuberculosis	38	45	9	20	10	9	..	..	131
16 Cancer and other Malignant Tumours ..	1,162	802	408	269	176	109	6	..	2,932
17 Meningitis	57	38	19	18	6	4	1	..	143
18 Haemorrhage, Embolism, and Softening of Brain	590	405	207	162	82	55	1	..	1,502
19 Diseases of the Heart	1,747	1,139	621	303	244	165	6	1	4,226
20 Acute Bronchitis ..	78	26	25	9	5	2	..	..	145
21 Chronic Bronchitis ..	145	123	71	34	36	10	..	..	419
22 Pneumonia	547	334	166	114	126	58	..	..	1,345
23 Other Diseases of the Respiratory System (Tuberculosis excptd.)	497	456	225	111	139	45	1	1	1,475
24 Diseases of the Stomach (Cancer excepted) ..	112	89	51	21	23	10	..	..	306
25*a* Diarrhoea and Enteritis (children under 2 years of age) ..	308	272	74	38	87	15	..	..	794
25*b* Diarrhoea and Enteritis (2 years and over) ..	67	57	49	21	17	10	..	..	221
26 Appendicitis & Typhlitis	104	76	47	36	11	7	..	..	281
27 Hernia, Intestinal Obstruction	120	97	41	16	18	10	..	..	302
28 Cirrhosis of the Liver	69	54	41	17	12	7	..	..	200
29 Acute and Chronic Nephritis	689	460	298	163	87	49	1	2	1,749
30 Non-cancerous Tumours and other Diseases of Female Genital Organs	..	..	..	..	..	..	..	..	..
31 Puerperal Septicaemia (Puerperal Fever) ..	..	..	..	..	..	..	..	..	..
32 Other Puerperal Accidents of Pregnancy and Confinement ..	..	..	..	..	..	..	..	..	..
33 Congenital Debility and Malformations ..	805	607	274	176	136	85	..	1	2,084
34 Senility	643	568	315	201	105	63	8	..	1,903
35*a* Homicides	18	6	6	12	3	3	..	..	48
35*b* Other Accidental Deaths	929	629	390	202	210	77	4	1	2,442
36 Suicides	212	161	81	48	47	17	3	..	569
37 Other Diseases ..	1,784	1,251	729	411	294	164	6	1	4,640
38 Unspecified or Ill-defined Diseases	154	114	42	78	42	11	1	..	442
Total—Males ..	11,944	8,582	4,581	2,729	2,157	1,081	51	9	31,134

CAUSES OF DEATH.—FEMALES, 1925.

Cause.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
1 Typhoid Fever ..	22	4	13	8	5	5	..	..	57
2 Typhus Fever ..	..	..	1	..	..	..	..	..	1
3 Malaria	2	1	6	..	..	..	1	..	10
4 Small-pox	..	..	..	..	..	..	..	..	..
5 Measles	17	23	7	17	..	..	..	..	64
6 Scarlet Fever ..	18	11	4	2	..	2	..	..	37
7 Whooping Cough ..	183	22	25	3	7	10	..	..	250
8 Diphtheria	58	33	22	9	4	7	..	..	133
9 Influenza—Pneumonic	31	17	22	5	6	3	..	..	84
9*a* Influenza—other ..	33	14	23	2	8	3	..	..	83
10 Asiatic Cholera ..	..	..	..	..	..	..	..	..	..
11 Cholera Nostras ..	..	..	..	..	..	..	..	..	..
12 Other Epidemic Diseases	60	69	32	15	9	6	..	..	191
13 Tuberculosis of the Respiratory System	409	401	136	148	77	53	1	..	1,225
14 Tuberculosis of the Meninges	22	36	1	13	6	1	..	..	79
15 Other forms of Tuberculosis	42	52	8	19	10	12	..	..	143
16 Cancer and other Malignant Tumours ..	971	841	284	237	124	88	..	..	2,545
17 Meningitis	29	24	20	15	4	1	1	..	94
18 Haemorrhage, Embolism, and Softening of Brain	577	483	166	181	64	65	..	..	1,536
19 Diseases of the Heart	1,304	1,050	381	277	129	118	1	..	3,260
20 Acute Bronchitis ..	68	17	12	13	3	2	..	..	115
21 Chronic Bronchitis ..	134	102	37	25	12	12	..	..	322
22 Pneumonia	358	217	112	95	51	40	..	..	873
23 Other Diseases of the Respiratory System (Tuberculosis exceptd.)	443	322	109	91	48	32	..	2	1,047
24 Diseases of the Stomach (Cancer excepted) ..	47	61	34	13	9	5	..	..	169
25*a* Diarrhoea and Enteritis (children under 2 years of age) ..	228	210	56	34	49	15	..	..	592
25*b* Diarrhoea and Enteritis (2 years and over) ..	72	68	44	16	11	10	..	..	221
26 Appendicitis & Typhlitis	74	38	23	10	5	7	..	..	157
27 Hernia, Intestinal Obstruction	99	92	27	19	17	8	..	..	262
28 Cirrhosis of the Liver	30	36	22	14	8	2	..	..	112
29 Acute and Chronic Nephritis	423	417	209	102	49	29	..	..	1,229
30 Non-cancerous Tumours and other Diseases of Female Genital Organs	56	56	21	17	12	3	..	..	165
31 Puerperal Septicaemia (Puerperal Fever) ..	107	46	32	27	14	10	..	..	236
32 Other Puerperal Accidents of Pregnancy and Confinement ..	220	111	89	51	39	20	..	..	530
33 Congenital Debility and Malformations ..	648	449	224	132	84	67	..	..	1,604
34 Senility	435	647	216	191	68	102	1	..	1,660
35*a* Homicides	13	12	2	3	2	3	..	..	35
35*b* Other Accidental Deaths	264	207	110	55	32	21	2	1	692
36 Suicides	55	36	15	14	5	6	..	..	131
37 Other Diseases ..	1,267	963	400	337	174	139	4	..	3,284
38 Unspecified or Ill-defined Diseases	59	67	19	40	13	8	..	..	206
Total—Females ..	8,878	7,255	2,964	2,250	1,158	915	11	3	23,434

CAUSES OF DEATH.—PERSONS, 1925.

Cause.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
1 Typhoid Fever	80	19	38	15	12	6	..	..	170
2 Typhus Fever	..	..	2	1	..	..	..	..	3
3 Malaria	2	2	24	..	3	1	3	..	35
4 Small-pox	..	..	..	..	..	..	..	..	..
5 Measles	30	46	9	45	..	..	..	..	130
6 Scarlet Fever	27	17	6	2	..	3	..	..	55
7 Whooping Cough	318	42	55	6	14	27	..	1	463
8 Diphtheria	119	69	46	19	6	13	1	..	273
9 Influenza—Pneumonic	74	44	44	6	18	4	..	..	190
9a Influenza—other	63	24	48	4	17	4	..	1	161
10 Asiatic Cholera	..	..	..	..	..	..	..	..	..
11 Cholera Nostras	..	..	..	..	..	..	..	..	..
12 Other Epidemic Diseases	139	142	69	31	25	13	..	..	419
13 Tuberculosis of the Respiratory System	1,024	930	341	322	256	110	11	..	2,994
14 Tuberculosis of the Meninges	48	69	2	20	12	5	..	..	156
15 Other forms of Tuberculosis	80	97	17	39	20	21	..	..	274
16 Cancer and other Malignant Tumours	2,133	1,643	692	506	300	197	6	..	5,477
17 Meningitis	86	62	39	33	10	5	2	..	237
18 Haemorrhage, Embolism, and Softening of Brain	1,167	888	373	343	146	120	1	..	3,038
19 Diseases of the Heart	3,051	2,189	1,002	580	373	283	7	1	7,486
20 Acute Bronchitis	146	43	37	22	8	4	..	..	260
21 Chronic Bronchitis	279	225	108	59	48	22	..	..	741
22 Pneumonia	905	551	278	209	177	98	..	..	2,218
23 Other Diseases of the Respiratory System (Tuberculosis excptd.)	940	778	334	202	187	77	1	3	2,522
24 Diseases of the Stomach (Cancer excepted)	159	150	85	34	32	15	..	..	475
25a Diarrhoea and Enteritis (children under 2 years of age)	536	482	130	72	136	30	..	..	1,386
25b Diarrhoea and Enteritis (2 years and over)	139	125	93	37	28	20	..	..	442
26 Appendicitis & Typhlitis	178	114	70	46	16	14	..	..	438
27 Hernia, Intestinal Obstruction	219	189	68	35	35	18	..	..	564
28 Cirrhosis of the Liver	99	90	63	31	20	9	..	..	312
29 Acute and Chronic Nephritis	1,112	877	507	265	136	78	1	2	2,978
30 Non-cancerous Tumours and other Diseases of Female Genital Organs	56	56	21	17	12	3	..	..	165
31 Puerperal Septicaemia (Puerperal Fever)	107	46	32	27	14	10	..	..	236
32 Other Puerperal Accidents of Pregnancy and Confinement	220	111	89	51	39	20	..	..	530
33 Congenital Debility and Malformations	1,453	1,056	498	308	220	152	..	1	3,688
34 Senility	1,078	1,215	531	392	173	165	9	..	3,563
35a Homicides	31	18	8	15	5	6	..	..	83
35b Other Accidental Deaths	1,193	836	500	257	242	98	6	2	3,134
36 Suicides	267	197	96	62	52	23	3	..	700
37 Other Diseases	3,051	2,214	1,129	748	468	303	10	1	7,924
38 Unspecified or Ill-defined Diseases	213	181	61	118	55	19	1	..	648
Total—Persons	20,822	15,837	7,545	4,979	3,315	1,996	62	12	54,568

The next table shows the total deaths in Australia during the last five years in accordance with the abridged classification alluded to previously.

CAUSES OF DEATH.—AUSTRALIA, 1921 TO 1925.

PERSONS.

Cause.	1921.	1922.	1923.	1924.	1925.
1 Typhoid Fever	352	227	242	218	170
2 Typhus Fever	..	..	1	..	3
3 Malaria	43	21	21	30	35
4 Small-pox	2	2	..	..	..
5 Measles	83	28	222	119	130
6 Scarlet Fever	42	38	45	55	55
7 Whooping Cough	428	182	119	420	463
8 Diphtheria	917	543	395	437	273
9 Influenza—Pneumonic	346	162	769	341	190
9A Influenza—other	308	193	441	241	161
10 Asiatic Cholera	..	..	..	..	..
11 Cholera Nostras	2	1	3	2	..
12 Other Epidemic Diseases	295	302	341	340	419
13 Tuberculosis of the Respiratory System	*a* 3,205	*a* 2,954	3,102	3,066	2,994
14 Tuberculosis of the Meninges	218	176	159	167	156
15 Other forms of Tuberculosis	264	267	283	316	274
16 Cancer and other Malignant Tumours	4,768	5,052	5,073	5,424	5,477
17 Meningitis	495	460	438	415	237
18 Haemorrhage, Embolism, and Softening of the Brain	2,472	2,833	2,989	2,305	3,038
19 Diseases of the Heart	5,897	6,013	5,898	6,294	7,486
20 Acute Bronchitis	386	283	351	300	260
21 Chronic Bronchitis	816	796	892	808	741
22 Pneumonia	2,066	2,151	2,726	2,374	2,218
23 Other Diseases of the Respiratory System (Tuberculosis excepted)	2,304	2,208	2,901	2,742	2,522
24 Diseases of the Stomach (Cancer excepted)	439	467	444	437	475
25A Diarrhœa and Enteritis (children under two years only)	2,589	1,743	2,338	1,810	1,386
25B Diarrhœa and Enteritis (2 years and over)	985	607	624	486	442
26 Appendicitis and Typhlitis	351	402	436	408	438
27 Hernia, Intestinal Obstruction	480	545	508	551	564
28 Cirrhosis of the Liver	323	323	273	300	312
29 Acute and Chronic Nephritis	2,139	2,333	2,460	2,893	2,978
30 Non-cancerous Tumours and other Diseases of the Female Genital Organs	166	169	174	199	165
31 Puerperal Septicaemia (Puerperal Fever, Peritonitis)	208	196	233	265	236
32 Other Puerperal Accidents of Pregnancy and Confinement	435	425	458	473	530
33 Congenital Debility and Malformations	3,758	3,521	4,025	3,859	3,688
34 Senility	3,981	4,044	4,685	4,156	3,563
35 Violent Deaths—					
(*a*) Homicides	76	80	92	108	83
(*b*) Other Accidental Deaths	2,816	2,510	2,582	2,833	3,134
36 Suicides	621	533	599	653	700
37 Other Diseases	8,279	7,856	8,203	8,400	7,924
38 Unspecified or Ill-defined Diseases	721	665	691	735	648
Total	54,076	51,311	56,236	54,980	54,568

(*a*) Includes acute disseminated tuberculosis.

NOTE.—In consequence of changes made in the classification of the causes of death the figures given in the table above are not on identical lines throughout the period covered.

15. Deaths from Special Causes.—The above table furnishes particulars for the last five years only, and comparisons will, therefore, generally be restricted to that period.

(i) *Typhoid Fever.* The number of deaths from typhoid fever declined from 352 in 1921 to 170 in 1925, the rate for the latter year being 3 per 100,000 living, and much lower than the average for the last five years. Of the 170 who died, 113 were males and 57 females.

(ii) *Typhus.* Deaths from typhus have been rare in Australia. During 1925, 3 deaths were recorded from this cause, of which 2 occurred in Queensland and 1 in South Australia. In 1923 1 death occurred in South Australia. These represent the only deaths recorded from typhus in Australia.

(iii) *Malaria.*—Deaths from malarial diseases are mainly confined to the tropical districts of Northern Queensland and Western Australia, and to the Northern Territory; 24 out of the 35 deaths registered in 1925 occurred in Queensland, 2 in New South Wales, 2 in Victoria, 3 in Western Australia, 3 in the Northern Territory, and 1 in Tasmania.

(iv) *Small-pox.* The number of deaths from small-pox in Australia is very small, and during the five years under review only 4 deaths occurred from this cause.

(v) *Measles.* Of the deaths from measles the greatest number took place in 1923, when 222 were registered, while the minimum was in 1922 with a total of 28 deaths. During 1925 there were 130 deaths, of which 66 were males and 64 females; of these, 46 were registered in Victoria, 45 in South Australia, 30 in New South Wales, and 9 in Queensland.

(vi) *Scarlet Fever.* The mortality from this source is very low, the average number of deaths from 1921 to 1925 being 47 per annum.

(vii) *Whooping Cough.* In 1925 there were 463 deaths, which was the highest number during the period 1921 to 1925. Of the 463 deaths, 213 were males and 250 females. Of the total for 1925, 318 deaths occurred in New South Wales, 42 in Victoria, 55 in Queensland, 6 in South Australia, 14 in Western Australia, and 27 in Tasmania. The death rate in 1925 was 8 per 100,000 persons.

(viii) *Diphtheria.* The number of deaths due to diphtheria declined from 917 in 1921 to 273 in 1925. Of the 273 deaths in 1925 (representing a death rate of 5 per 100,000 persons) 140 were males and 133 females. The numbers in each State were as follows:—New South Wales 80, Victoria 19, Queensland 38, South Australia 15, Western Australia 12, and Tasmania 6.

(ix) *Influenza.* The deaths from influenza during 1925 were less than in 1923, when they were more numerous than in any year since the extraordinary epidemic of 1919. In 1925, there were 351 deaths from this disease, representing a rate of 6 per 100,000 persons. Of these deaths, 190 were ascribed to pneumonic influenza and 161 to ordinary influenza.

(x) *Asiatic Cholera.* No deaths from Asiatic cholera have been recorded in Australia.

(xi) *Cholera Nostras.* For the five years under review only 8 deaths have been due to this cause.

(xii) *Other Epidemic Diseases.* The deaths registered under this heading numbered 419 in 1925. The list includes:—Dysentery 102, lethargic encephalitis 88, meningococcal meningitis 83, erysipelas 70, acute poliomyelitis 58, mumps 9, leprosy 2, and other epidemic diseases 7. There were no deaths from plague in the years 1924 and 1925. Outbreaks occurred in 1921 and 1922, causing 61 deaths in Queensland and 10 in New South Wales, and 1 death occurred in 1923 in New South Wales.

(xiii) *Tuberculosis of the Respiratory System.* Of the various forms of tuberculosis prevalent in Australia, phthisis, or tuberculosis of the lungs, has attracted the most attention. The intimate relation, however, between tuberculosis of the lungs and of other parts of the respiratory system renders it desirable that all forms of tuberculosis of the respiratory system should be brought under one head for investigations concerning the age incidence and duration of this disease.

During 1925 there were 2,994 deaths from tuberculosis of the respiratory system, which compares favourably with the average of 3,082 for the preceding four years. The 2,994 deaths in 1925 represented a rate of 50 per 100,000 persons. Of these deaths, 1,769 were males and 1,225 females.

(xiv) *Tuberculosis of the Meninges.* The number of deaths ascribed to this cause in 1925 was 156, which is the smallest number for the last five years. The largest number, viz.: 218, occurred in 1921.

(xv) *Other Forms of Tuberculosis.* The deaths in 1925 include the following:—Tuberculosis of the intestines and peritoneum 75; tuberculosis of the spinal column, 39; tuberculosis of the joints, 19; tuberculosis of other organs 35; acute disseminated tuberculosis, 81; and chronic disseminated tuberculosis, 25.

(xv*a*) *All Forms of Tuberculosis.*—(*a*) *General.* A tabulation of all the tubercular diseases from which deaths occurred in 1925 will be found in Bulletin No. 43 of "Australian Demography." The total number of deaths therefrom in 1925 was 3,424, viz., 1,977 males and 1,447 females.

(*b*) *Ages at Death.* The following table shows the ages of these 3,424 persons :—

TUBERCULAR DISEASES.—DEATHS IN AGE-GROUPS, AUSTRALIA, 1925.

Ages.	Male.	Female.	Total.	Ages.	Male.	Female.	Total.
Under 5 years ..	69	69	138	55 years and under 60	170	49	219
5 years and under 10	24	18	42	60 ,, ,, 65	134	47	181
10 ,, ,, 15	18	34	52	65 ,, ,, 70	94	33	127
15 ,, ,, 20	50	132	182	70 ,, ,, 75	44	12	56
20 ,, ,, 25	105	222	327	75 ,, ,, 80	19	17	36
25 ,, ,, 30	193	208	401	80 ,, over ..	9	2	11
30 ,, ,, 35	221	195	416				
35 ,, ,, 40	230	140	370	Unspecified ..	..	1	1
40 ,, ,, 45	222	94	316				
45 ,, ,, 50	185	99	284				
50 ,, ,, 55	190	75	265	Total ..	1,977	1,447	3,424

(*c*) *Occupations at Death, Males.* A tabulation of occupations of the males who died from tubercular diseases in 1925 is given hereunder :—

OCCUPATIONS OF MALES WHO DIED FROM TUBERCULAR DISEASES—AUSTRALIA, 1925.

Occupations.	No. of Male Deaths.	Occupations.	No. of Male Deaths.
PROFESSIONAL CLASS—		INDUSTRIAL CLASS—	
Government, Defence, Law ..	52	Art and Mechanic Productions	91
Others	62	Textiles and Fibrous Materials	55
		Food and Drinks	19
DOMESTIC CLASS—		Animal and Vegetable Substances	8
Board and Lodging	33	Metals and Minerals ..	46
Others	29	Fuel, Light and Energy ..	17
		Building and Construction ..	83
COMMERCIAL CLASS—		Others	430
Property and Finance ..	23		
Art, Mechanic and Textile Products	19	AGRICULTURAL, PASTORAL, MINING, ETC., CLASS—	
Foods and Drinks	51	Agricultural	150
Animal and Vegetable Substances	5	Pastoral	39
Fuel, Light and Metal ..	5	Mining and Quarrying ..	161
Merchants and Dealers ..	34	Others	12
Others	150		
		INDEPENDENT MEANS ..	37
TRANSPORT AND COMMUNICATION CLASS—			
		DEPENDENTS	137
Railway Traffic	42		
Road and Tramway Traffic ..	65	OCCUPATION NOT STATED ..	47
Sea and River Traffic ..	57		
Others	18	TOTAL MALE DEATHS ..	1,977

(*d*) *Length of Residence in Australia.* The length of residence in Australia of persons who died from tubercular diseases in 1925 is given in the next table.

LENGTH OF RESIDENCE IN AUSTRALIA OF PERSONS WHO DIED FROM TUBERCULAR DISEASES, 1925.

Length of Residence in Australia.	Male.	Fem.	Total.	Length of Residence in Australia.	Male.	Fem.	Total.
Born in Australia ..	1,413	1,251	2,664	Resident 10 years & under 15	94	43	137
Resident under 1 year ..	15	2	17	,, 15 ,, ,, 20	50	15	65
,, 1 year ..	7	7	14	,, 20 ,, over ..	257	79	336
,, 2 years ..	14	8	22	Length of residence not stated	79	16	95
,, 3 ,, ..	15	8	23				
,, 4 ,, ..	11	5	16				
,, 5 ,, and under 10	22	13	35	Total Deaths ..	1,977	1,447	3,424

(*e*) *Death Rates.* The preceding table and the table on page 937 show that, among persons who have lived less than five years in Australia, 722 deaths occurred, and of these 92, or 12.7 per cent., were due to tubercular diseases.

In order to show the prevalence of tuberculosis in the several States, the death rates from tubercular diseases are given in the following table, together with the proportion which deaths from tuberculosis bear to 10,000 deaths from all causes :—

TUBERCULOSIS (ALL FORMS).—DEATH RATES (*a*) AND PROPORTION OF TOTAL DEATHS, 1925.

State.	Death Rates (*a*) from Tuberculosis.			Proportion per 10,000 Deaths from all Causes.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	59	42	51	569	533	553
Victoria	73	58	66	707	674	692
Queensland	48	36	42	469	489	477
South Australia	72	68	70	737	800	765
Western Australia	99	55	78	904	803	869
Tasmania	66	62	64	648	721	681
Northern Territory ..	387	91	299	1,961	909	1,774
Australia	65	50	58	635	618	628

(*a*) Number of deaths from tuberculosis per 100,000 of mean population.

(*f*) *Death Rates, Various Countries.* The following comparative table for various countries shows that Australia occupies a very favourable position as regards the death rate from this disease.

TUBERCULOSIS.—DEATHS PER 100,000 PERSONS LIVING, VARIOUS COUNTRIES.

Country.	Year.	Respiratory System.	All Forms.
Rumania ..	1914	40	(*a*)
Queensland ..	1925	40	42
Union of South Africa (Whites)	1925	38	45
New South Wales	1925	45	51
New Zealand ..	1925	43	51
Australia ..	**1925**	**50**	**58**
Ontario (Canada)	1925	49	59
Tasmania ..	1925	52	64
Canada (exclusive of Quebec) ..	1925	55	66
Victoria ..	1925	56	66
South Australia	1925	59	70
Ceylon ..	1925	66	72
Western Australia	1925	70	78
United States (Registration Area)	1924	79	90
New York State	1925	82	91
Denmark ..	1925	85	100
Belgium ..	1924	71	103
England and Wales	1925	83	104
Netherlands ..	1923	79	105
Great Britain ..	1923	84	109
Scotland ..	1925	76	110
Egypt ..	1925	92	115
Quebec (Canada)	1923	97	118
Germany ..	1924	101	120
Prussia ..	1924	(*a*)	122
Sweden ..	1925	(*a*)	142
Italy	1923	110	143
Irish Free State	1924	117	145
Spain ..	1923	126	155
Switzerland ..	1922	119	157
Northern Ireland	1925	125	167
France ..	1920	151	185
Japan ..	1924	135	194
Czecho-Slovakia	1925	173	195
Norway ..	1921	157	198
Austria ..	1922	(*a*)	218
Chile	1923	223	232
Finland ..	1925	221	254
Hungary ..	1925	224	255
Bulgaria ..	1925	269	346

(*a*) Not available.

(xvi) *Cancer and other Malignant Tumours.*—(*a*) *General.* The number of deaths from cancer has increased continuously to 5,477 in 1925. Of the deaths registered in 1925, 2,932 were of males, viz., 1,162 in New South Wales, 802 in Victoria, 408 in Queensland, 269 in South Australia, 176 in Western Australia, 109 in Tasmania, and 6 in the Northern Territory; while 2,545 were of females, viz., 971 in New South Wales, 841 in Victoria, 284 in Queensland, 237 in South Australia, 124 in Western Australia, and 88 in Tasmania.

(*b*) *Type and Seat of Disease.* Tables showing the type and seat of disease, in conjunction with age, and also with conjugal condition, of the persons dying from cancer in 1925 will be found in Bulletin No. 43 of "Australian Demography." A summary regarding type and seat of disease for the year 1925 is given hereunder:—

DEATHS FROM CANCER.—TYPE AND SEAT OF DISEASE, AUSTRALIA, 1925.

Type of Disease.	Males.	Females	Persons.	Seat of Disease.	Males.	Females	Persons.
Carcinoma ..	1,716	1,562	3,278	Stomach and liver ..	1,252	714	1,966
Cancer	519	456	975	Peritoneum, intestines and rectum	442	403	845
Malignant disease ..	264	243	507	Female genital organs ..	..	520	520
Sarcoma	192	133	325	Breast	..	444	444
Epithelioma ..	138	59	197	Buccal cavity ..	303	23	326
Malignant tumour	57	51	108	Skin	146	72	218
Rodent ulcer ..	34	23	57	Other organs ..	789	369	1,158
Neoplasm ..	7	5	12				
Scirrhus	1	11	12				
Hypernephroma ..	4	2	6				
Total Deaths ..	2,932	2,545	5,477	Total Deaths ..	2,932	2,545	5,477

(*c*) *Ages at Death.* The ages of the 5,477 persons who died from cancer in 1925 are given in the following table, which shows that while the ages below 35 are not immune from the disease, the great majority of deaths occurred at ages from 35 upwards, the maximum being found in the age-group 60 to 65:—

DEATHS FROM CANCER.—AGES, AUSTRALIA, 1925.

Ages.	Males.	Females	Total.	Ages.	Males.	Females	Total.
Under 15 years ..	26	22	48	60 years and under 65	540	373	913
15 years and under 20	10	4	14	65 „ „ 70	513	341	854
20 „ „ 25	15	3	18	70 „ „ 75	427	279	706
25 „ „ 30	15	22	37	75 „ „ 80	260	219	479
30 „ „ 35	20	32	52	80 „ „ 85	137	139	276
35 „ „ 40	53	104	157	85 years and over	70	61	131
40 „ „ 45	81	142	223	Unspecified ..	..	..	..
45 „ „ 50	152	198	350				
50 „ „ 55	246	274	520				
55 „ „ 60	367	332	699	Total Deaths ..	2,932	2,545	5,477

(*d*) *Occupations.* A tabulation in summarized form of occupations of the males who died from cancer in 1925 is given hereunder:—

OCCUPATION OF MALES WHO DIED FROM CANCER.—AUSTRALIA, 1925.

Occupation.	No. of Male Deaths.	Occupation.	No. of Male Deaths.
PROFESSIONAL CLASS—		INDUSTRIAL CLASS—	
Government, Defence, Law	60	Art and Mechanic Productions	131
Others	96	Textiles and Fibrous Materials	64
		Food and Drinks	36
DOMESTIC CLASS—			
Board and Lodging	58	Animal and Vegetable Substances	8
Others	42	Metals and Minerals	73
		Fuel, Light and Energy	14
COMMERCIAL CLASS—		Building and Construction	173
Property and Finance	39	Others	672
Art, Mechanic, and Textile Products	20	AGRICULTURAL PASTORAL, MINING, ETC., CLASS—	
Food and Drinks	83		
Animal and Vegetable Substances	9	Agricultural	439
Fuel, Light and Metals	7	Pastoral	119
Merchants and Dealers	65	Mining and Quarrying	105
Others	144	Others	31
		INDEPENDENT MEANS	69
TRANSPORT AND COMMUNICATION CLASS—		DEPENDENT	43
Railway Traffic	70		
Road and Tramway Traffic	87	OCCUPATIONS UNSPECIFIED	91
Sea and River Traffic	67		
Others	17	TOTAL MALE DEATHS	2,932

(*e*) *Death Rates.* The following table shows that the death rate for males is higher than that for females in every State with the exception of Victoria.

DEATHS FROM CANCER.—RATES(*a*) AND PROPORTIONS, 1925.

State.	Death Rates (*a*) from Cancer.			Proportion of 10,000 Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	100	87	94	973	1,094	1,024
Victoria	96	100	98	935	1,159	1,037
Queensland	91	71	81	891	958	917
South Australia	97	89	93	986	1,054	1,016
Western Australia	89	73	81	816	1,071	905
Tasmania	102	82	92	1,008	962	987
Northern Territory	232	..	163	1,176	..	968
Australia	97	88	92	942	1,086	1,004

(*a*) Number of deaths from cancer per 100,000 of mean population.

(*f*) *Comparison with Tuberculosis.* In recent years the death rate from tuberculosis has shown a tendency to decrease, while that from cancer has displayed an almost continuous increase. The table hereunder shows that for each of the years under review, the death rate for cancer has been greater than that from tuberculosis, the excess varying from 19 per 100,000 persons in 1921 to 34 in 1925. During the whole period the mortality of both sexes from cancer was always greater than that from tuberculosis.

TUBERCULOSIS AND CANCER.—DEATH RATES(*a*) AUSTRALIA, 1921 TO 1925.

Year.	Death Rate (*a*) from Tuberculosis.			Death Rate (*a*) from Cancer.		
	Males.	Females.	Total.	Males.	Females.	Total.
1921	78	56	68	88	87	87
1922	71	51	61	93	88	91
1923	71	53	62	91	88	89
1924	71	51	61	96	91	93
1925	65	50	58	97	88	92

(*a*) Number of deaths per 100,000 of mean population.

(*g*) *Deaths, Various Countries.* The following table shows the Australian death rate from cancer in comparison with that for other countries :—

CANCER.—DEATHS PER 100,000 PERSONS LIVING, VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Ceylon	1925	8	**Australia**	**1925**	**92**
Rumania	1914	13	United States (Registration Area) ..	1924	92
Greece	1921	18	Irish Free State ..	1924	92
Egypt	1925	25	Prussia	1924	94
Chile	1923	40	Ontario (Canada) ..	1925	95
Quebec (Canada) ..	1923	57	Czecho-Slovakia ..	1925	99
Spain	1923	63	Norway	1921	105
Bulgaria	1925	64	Germany	1924	108
Japan	1924	68	Netherlands ..	1923	113
Italy	1923	71	Northern Ireland ..	1925	115
Union of South Africa (Whites)	1925	73	New York State ..	1925	117
Uruguay	1923	74	Sweden	1922	123
France	1920	78	Great Britain ..	1923	127
Belgium	1924	81	Austria	1922	127
Canada (exclusive of Quebec)	1925	81	Switzerland ..	1922	130
Hungary	1925	83	England and Wales..	1925	134
New Zealand ..	1925	91	Scotland	1925	136
			Denmark	1925	140

The fifth issue of this Year Book contains on pages 230, *et seq.*, a paper dealing, *inter alia*, with the incidence of cancer in Australia.

(xvii) *Meningitis.* The deaths during 1925 from meningitis numbered 237, of which 86 occurred in New South Wales, 62 in Victoria, 39 in Queensland, 33 in South Australia, 10 in Western Australia, 5 in Tasmania, and 2 in the Northern Territory.

(xviii) *Cerebral Hæmorrhage, Embolism and Softening of the Brain.* The deaths under this heading have increased in number during the period under review. The figures for 1925 are made up as follows:—Cerebral hæmorrhage and apoplexy, 1,278 males and 1,291 females; cerebral embolism, 191 males, 211 females; softening of the brain, 33 males and 34 females.

(xix) *Diseases of the Heart.* The number of deaths in 1925 was 7,486, viz., 4,226 males and 3,260 females; of the 7,486 deaths 33 were attributed to pericarditis, 395 to endocarditis and acute myocarditis, 306 to angina pectoris, and 6,752 to other diseases of the heart. Of these deaths, New South Wales contributed 1,747 males and 1,304 females; Victoria, 1,139 males and 1,050 females; Queensland, 621 males and 381 females; South Australia, 303 males and 277 females; Western Australia, 244 males and 129 females; Tasmania, 165 males and 118 females; Northern Territory, 6 males and 1 female; and Federal Capital Territory, 1 male. The death rates and proportions per 10,000 deaths in 1925 were as follows:—

DEATH RATES (*a*) FROM DISEASES OF THE HEART AND PROPORTION OF 10,000 TOTAL DEATHS, AUSTRALIA, 1925.

State or Territory.	Death Rates (*a*) from Diseases of the Heart.			Proportion of 10,000 Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	151	117	134	1,463	1,469	1,465
Victoria	137	113	131	1,327	1,447	1,382
Queensland	138	95	118	1,356	1,286	1,328
South Australia	109	104	107	1,110	1,231	1,165
Western Australia	124	76	101	1,131	1,114	1,125
Tasmania	155	110	133	1,526	1,290	1,418
Northern Territory	232	91	190	1,176	909	1,129
Federal Capital Territory	33	..	21	1,111	..	833
Australia	140	112	126	1,358	1,391	1,372

(*a*) Number of deaths from Diseases of the Heart per 100,000 of mean population.

(xx) *Acute Bronchitis.* Deaths from bronchitis are classified under the following headings:—(*a*) Acute, (*b*) chronic, (*c*) unspecified, under five years of age, and (*d*) unspecified, five years and over. For the purpose of the abridged classification, (*a*) and (*c*) are treated as "acute," and (*b*) and (*d*) as "chronic" bronchitis. Acute bronchitis caused 386 deaths in 1921, 283 in 1922, 351 in 1923, 300 in 1924, and 260 in 1925, viz., 145 males and 115 females.

(xxi) *Chronic Bronchitis.* The deaths from this cause in 1925 numbered 741, viz., 419 males and 322 females.

(xxii) *Pneumonia.* The deaths from pneumonia during 1925 were 2,218—1,345 males and 873 females—which is 5 per cent. below the average for the previous four years.

(xxiii) *Other Diseases of the Respiratory System.* Deaths under this heading in 1921 numbered 2,304; in 1922, 2,208; in 1923, 2,901; in 1924, 2,742; and in 1925, 2,522. The total for 1925 is made up as follows, viz.:—Diseases of the nasal fossae, 14; diseases of the larynx, 39; broncho-pneumonia, 1,399; capillary bronchitis, 19; pleurisy, 194; pulmonary congestion and apoplexy, 279; gangrene of the lungs, 15; asthma, 165; pulmonary emphysema, 17; chronic interstitial pneumonia, 311; other diseases of the respiratory system (tuberculosis excepted), 70.

(xxiv) *Diseases of the Stomach* (*Cancer excepted*). In 1925 this heading includes ulcer of the stomach, 130 males, 62 females; ulcer of the duodenum, 86 males, 18 females; and other diseases of the stomach (cancer excepted), 90 males, 89 females; a total of 475.

(xxv*a*) *Diarrhœa and Enteritis* (*Children under two years only*). The number of deaths due to these causes fell from 2,589 in 1921 to 1,386 in 1925. During 1925, 8,427 children died before reaching their second birthday, and of these, 1,386, or 16.4 per cent., died from diarrhœa and enteritis. The ages of children dying from these diseases during the first year of life will be found on page 933.

The number of deaths (under 2 years of age), the death rates, and proportions of 10,000 deaths due to diarrhœa and enteritis are given below :—

DEATHS, DEATH RATES(*a*), ETC., DIARRHŒA AND ENTERITIS (UNDER 2 YEARS OF AGE).—AUSTRALIA, 1925.

State.	Number of Deaths from Infantile Diarrhœa and Enteritis.			Death Rates (*a*) from Infantile Diarrhœa and Enteritis.			Proportion of 10,000 Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	308	228	536	27	20	24	258	257	257
Victoria.. ..	272	210	482	33	25	29	317	289	304
Queensland ..	74	56	130	16	14	15	162	189	172
South Australia ..	38	34	72	14	13	13	139	151	145
Western Australia	87	49	136	44	29	37	403	423	410
Tasmania ..	15	15	30	14	14	14	139	164	150
Australia ..	794	592	1,386	26	20	23	255	253	254

(*a*) Number of deaths from these diseases per 100,000 of mean population.

(xxv*b*) *Diarrhœa and Enteritis* (*2 years and over*). As in the case of infants the number of deaths from the same causes in older ages shows a very material decline, having fallen from 985 in 1921 to 442 in 1925.

(xxvi) *Appendicitis and Typhlitis.* Deaths under this heading numbered 351 in 1921, 402 in 1922, 436 in 1923, 408 in 1924, and 438 in 1925 ; the total for the last year included 281 males and 157 females.

(xxvii) *Hernia, Intestinal Obstruction.* The deaths under this heading have not varied greatly from year to year, the number registered in 1925 being 564, viz., hernia, 141, and intestinal obstruction, 423.

(xxviii) *Cirrhosis of the Liver.* The deaths from this cause during 1925 numbered 312, and include 31 deaths from alcoholic cirrhosis.

(xxix) *Acute and Chronic Nephritis.* The number of deaths attributable to these diseases shows a considerable increase. In 1921 there were 2,139 ; in 1922, 2,333 ; in 1923, 2,460 ; in 1924, 2,893 ; and in 1925, 2,978, viz., 1,749 males and 1,229 females. Of the deaths registered in 1925, 213 were ascribed to acute nephritis, and 2,765 to chronic nephritis. New South Wales was responsible for 1,112 deaths ; Victoria for 877 ; Queensland for 507 ; South Australia for 265 ; Western Australia for 136 ; Tasmania for 78 ; Northern Territory, 1 ; and Federal Capital Territory, 2.

(xxx) *Non-Cancerous Tumours and other Diseases of the Female Genital Organs.* Deaths in 1921 numbered 166 ; in 1922, 169 ; in 1923, 174 ; in 1924, 199 ; and in 1925, 165. Included in the 165 deaths in 1925 were the following :—Cysts, etc., of the ovary, 30 ; salpingitis and pelvic abscess, 57 ; benign tumours of the uterus, 48 ; uterine hæmorrhage (non-puerperal), 7 ; other diseases of the female genital organs, 23.

(xxxi) *Puerperal Septicæmia* (*Puerperal Fever*). The number of deaths from puerperal septicæmia during 1925 was less than in 1924, being 236, or 1.74 to every 1,000 live births. The corresponding rates during the preceding five years were :—1920, 1.83 ; 1921, 1.53 ; 1922, 1.43 ; 1923, 1.72 ; and 1924, 1.96. A statement is appended which shows the death rate per 1,000 live births from puerperal causes in various countries.

CHILDBIRTH.—DEATHS PER 1,000 LIVE BIRTHS, VARIOUS COUNTRIES.

Country.	Year.	Rates per 1,000 Live Births from—		
		Puerperal Sepsis.	Other Puerperal Causes.	All Puerperal Causes.
Sweden	1922	0.97	1.31	2.28
Netherlands	1923	0.62	1.71	2.33
Italy	1923	1.06	1.63	2.69
Japan	1924	1.26	1.88	3.14
Czecho-Slovakia	1925	1.40	1.86	3.26
England and Wales ..	1925	1.56	2.52	4.08
Great Britain	1923	1.44	2.89	4.33
Victoria	1925	1.28	3.09	4.37
Northern Ireland	1925	1.55	2.89	4.44
Spain	1923	2.77	1.78	4.55
New Zealand	1925	1.49	3.16	4.65
Irish Free State	1924	1.94	2.84	4.78
Germany	1924	2.76	2.35	5.11
New York State	1925	1.50	3.88	5.38
Ontario (Canada)	1925	1.50	4.10	5.60
Union of South Africa (Whites)	1925	1.82	3.80	5.62
Australia	**1925**	**1.74**	**3.90**	**5.64**
Canada (excluding Quebec) ..	1925	1.70	4.00	5.70
Bulgaria	1925	2.60	3.10	5.70
Tasmania	1925	1.92	3.83	5.75
Belgium	1924	3.12	2.68	5.80
Prussia	1924	3.18	2.65	5.83
Queensland	1925	1.58	4.39	5.97
New South Wales	1925	1.96	4.03	5.99
Scotland	1925	1.64	4.52	6.16
Western Australia	1925	1.71	4.76	6.47
United States	1924	2.40	4.10	6.50
Chile	1923	1.86	4.90	6.76
South Australia	1925	2.36	4.45	6.81
Ceylon	1925	7.10	11.40	18.50

(xxxii) *Other Puerperal Accidents of Pregnancy and Confinement.* The deaths under this heading in 1921 numbered 435 ; in 1922, 425 ; in 1923, 458 ; in 1924, 473 ; and in 1925, 530. Included in the 530 deaths in 1925 were the following :—Accidents of pregnancy, 98 ; puerperal hæmorrhage, 92 ; other accidents of childbirth, 98 ; puerperal phlegmasia alba dolens, embolus, sudden death, 57 ; puerperal albuminuria and convulsions, 176 ; deaths following childbirth, 9.

(xxxii*a*) *All Puerperal Causes.* The 766 deaths in 1925 under the two preceding headings correspond to a death rate of 26 per 100,000 females. It may be expressed in other terms by stating that 1 of every 175 women confined in 1925 died from puerperal causes. The corresponding ratios for married women were 1 of every 181, and for single women 1 of every 110. More detailed information will be found in a series of tables in Bulletin No. 43 " Australian Demography."

The ages of the mothers who died varied from 14 to 49 years as shown hereunder :—

DEATHS FROM PUERPERAL CAUSES.—AGES OF MOTHERS, AUSTRALIA, 1925.

Age at Death.	Married Women.	Single Women.	Total.	Age at Death.	Married Women.	Single Women.	Total.
14 years ..	..	1	1	33 years ..	25	1	26
15 ,, ..	..	2	2	34 ,, ..	33	..	33
16 ,, ..	..	2	2	35 ,, ..	35	..	35
17 ,, ..	2	5	7	36 ,, ..	33	2	35
18 ,, ..	3	3	6	37 ,, ..	32	..	32
19 ,, ..	13	5	18	38 ,, ..	28	1	29
20 ,, ..	11	9	20	39 ,, ..	34	..	34
21 ,, ..	15	1	16	40 ,, ..	16	..	16
22 ,, ..	22	2	24	41 ,, ..	18	..	18
23 ,, ..	21	2	23	42 ,, ..	26	..	26
24 ,, ..	34	2	36	43 ,, ..	10	..	10
25 ,, ..	35	3	38	44 ,, ..	6	..	6
26 ,, ..	30	..	30	45 ,, ..	7	..	7
27 ,, ..	31	2	33	46 ,, ..	1	..	1
28 ,, ..	28	5	33	47 ,, ..	1	..	1
29 ,, ..	42	..	42	48 ,, ..	1	..	1
30 ,, ..	44	4	48	49 ,, ..	1	..	1
31 ,, ..	37	2	39				
32 ,, ..	34	3	37	Total Deaths	709	57	766

The total number of children left by the married mothers was 1,969, an average of 2.8 children per mother.

Thirty-nine of the mothers who died had been married less than one year, 114 between one and two years, and 62 between two and three years. The duration of marriage ranged up to 30 years, apart from 4 cases in which the date of marriage was not stated. A tabulation, distinguishing the ages at marriage, will be found in Bulletin No. 43 " Australian Demography," which also includes a table, showing in combination the duration of marriage and previous issue.

(xxxiii) *Congenital Malformations, Debility, and Premature Birth.* The deaths under this heading in 1925 numbered 3,688, of which 3,644 were of children under one year of age. Over 50 per cent. of the deaths of children under one year of age were due to these causes. The number of deaths for 1925 is given in the following table :—

DEATHS FROM CONGENITAL DEBILITY, ETC., AND MALFORMATIONS, 1925.

State or Territory.	Congenital Malformations.			Congenital Debility, Icterus, Sclerema.			Premature Birth, and Injury at Birth.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	133	100	233	143	111	254	529	437	966
Victoria ..	81	81	162	137	97	234	389	271	660
Queensland ..	49	45	94	52	38	90	173	141	314
South Australia	26	17	43	47	28	75	103	87	190
Western Australia	14	17	31	35	14	49	87	53	140
Tasmania ..	11	12	23	21	17	38	53	38	91
Northern Territory	..	..	..	..	..	..	..	..	..
Fed. Cap. Territory	..	..	..	..	..	..	1	..	1
Australia ..	**314**	**272**	**586**	**435**	**305**	**740**	**1,335**	**1,027**	**2,362**
Number of deaths under one year per 1,000 births	4.27	3.70	3.99	6.25	4.60	5.45	19.20	15.51	17.40

(xxxiv) *Senility.* The deaths ascribed to " old age " prior to 1925 were in excess of those due to infantile debility. In 1925, 3,563 deaths were attributed to this cause as follows :—1,078 occurred in New South Wales, viz., 643 males and 435 females ; 1,215 in Victoria, viz., 568 males and 647 females ; 531 in Queensland, viz., 315 males and 216 females; 392 in South Australia, viz., 201 males and 191 females; 173 in Western Australia, viz., 105 males and 68 females; 165 in Tasmania, viz., 63 males and 102 females; and 9 in the Northern Territory, viz., 8 males and 1 female.

Of the males whose deaths were described as due to senility, 8 were stated to be over 100, while 8 females also were aged 100 years or over.

(xxxv*a*) *Violent Deaths, Homicides.* Deaths from homicide in 1925 numbered 83, this figure being slightly less than the average for the previous four years.

(xxxv*b*) *Other Accidental Deaths.* Deaths from accidents in 1925 numbered 3,134, as compared with an average of 2,685 for the previous four years. Of the deaths in 1925, 1,193 occurred in New South Wales; 836 in Victoria; 500 in Queensland; 267 in South Australia; 242 in Western Australia; 98 in Tasmania; 6 in Northern Territory; and 2 in the Federal Capital Territory.

The following table shows the various kinds of violent deaths, including homicides, recorded in Australia for the year 1925:—

DEATHS FROM EXTERNAL VIOLENCE.—AUSTRALIA, 1925.

Cause of Death.	Males.	Females.	Persons.
Poisoning by food	13	7	20
Venomous bites and stings	10	2	12
Other acute poisonings (gas excepted)	21	16	37
Conflagration	8	4	12
Burns (conflagration excepted)	129	172	301
Accidental mechanical suffocation	31	23	54
Absorption of irrespirable or poisonous gas	26	7	33
Accidental drowning	438	83	521
Traumatism by firearms	100	6	106
Traumatism by cutting or piercing instruments	3	1	4
Traumatism by fall	291	107	398
Traumatism in mines or quarries	78	..	78
Traumatism by machines	35	1	36
Traumatism by other crushing—			
Railway accidents	167	25	192
Tramway accidents	58	15	73
Automobile accidents	419	98	517
Injuries by other vehicles	217	28	245
Other crushings	161	13	174
Injuries by animals (not poisoning)	27	2	29
Wounds of war	13	..	13
Starvation, thirst, fatigue	21	2	23
Excessive cold	3	..	3
Effects of heat	19	14	33
Lightning	4	1	5
Other accidental electric shocks	26	3	29
Homicide by firearms	11	5	16
Homicide by cutting or piercing instruments	7	3	10
Homicide by other means	23	19	42
Infanticide (murder of children under 1 year)	7	8	15
Fractures (cause not specified)	32	29	61
Other external violence (cause specified)	73	24	97
Other external violence (cause unspecified)	19	9	28
Total Deaths	2,490	727	3,217
Death Rate per 100,000 of mean population	82	25	54

(xxxvi) *Suicide.* (*a*) *General.* Deaths by suicide in 1925 showed an increase on the figures for each of the previous four years, the number in 1921 being 621, viz., 510 males, and 111 females; in 1922, 533, viz., 441 males and 92 females; in 1923, 599, viz., 492 males and 107 females; in 1924, 653, viz., 534 males and 119 females; and in 1925, 700, viz., 569 males and 131 females.

(*b*) *Modes Adopted.* The modes adopted by persons who committed suicide in the years 1921 to 1925 were as follows :—

SUICIDES, MODES ADOPTED.—AUSTRALIA, 1921 TO 1925.

Mode of Death.	Males.		Females.		Persons.	
	Total of 4 years, 1921–24.	1925.	Total of 4 years, 1921–24.	1925.	Total of 4 years, 1921–24.	1925.
Poisoning	405	114	185	57	590	171
Poisonous gas	19	10	14	4	33	14
Hanging or Strangulation ..	293	86	53	19	346	105
Drowning	200	54	88	23	288	77
Firearms	595	169	30	5	625	174
Cutting or piercing instruments	367	107	33	14	400	121
Jumping from a high place ..	28	9	10	2	38	11
Crushing	41	12	11	4	52	16
Other Modes	29	8	5	3	34	11
Total	1,977	569	429	131	2,406	700

(*c*) *Death Rates.* The death rates from suicide and the proportion per 10,000 of total deaths are given in the following table :—

SUICIDE.—DEATHS, DEATH RATES(*a*), AND PROPORTION OF TOTAL DEATHS, 1925.

State or Territory.	Number of Deaths.			Death Rates (*a*) from Suicide.			Proportion of 10,000 Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	212	55	267	18	5	12	178	62	128
Victoria.. ..	161	36	197	19	4	12	188	50	124
Queensland ..	81	15	96	18	4	11	177	51	127
South Australia ..	48	14	62	17	5	11	176	62	125
Western Australia	47	5	52	24	3	14	218	43	157
Tasmania ..	17	6	23	16	6	11	157	66	115
Northern Territory	3	..	3	116	..	81	588	..	484
Fed. Cap. Territory	..	..	..	..	..	..	..	..	..
Australia ..	569	131	700	19	5	12	183	56	128

(*a*) Number of deaths from suicide per 100,000 of mean population.

(*d*) *Ages.* From the following table, which shows the ages of the persons who committed suicide in 1925, it will be seen that both extreme youth and extreme old age are represented :—

AGES OF PERSONS WHO COMMITTED SUICIDE.—AUSTRALIA, 1925.

Ages.	M.	F.	Total.	Ages.	M.	F.	Total.
10 years and under 15	2	..	2	60 years and under 65	47	5	52
15 ,, ,, 20	13	6	19	65 ,, ,, 70	39	2	41
20 ,, ,, 25	38	9	47	70 ,, ,, 75	30	3	33
25 ,, ,, 30	54	13	67	75 ,, ,, 80	10	..	10
30 ,, ,, 35	58	22	80	80 ,, ,, 85	4	2	6
35 ,, ,, 40	53	21	74	85 ,, ,, 90	3	..	3
40 ,, ,, 45	57	15	72	90 ,, ,, 95	2	..	2
45 ,, ,, 50	54	12	66	Not stated ..	3	1	4
50 ,, ,, 55	50	9	59				
55 ,, ,, 60	52	11	63	Total Deaths ..	569	131	700

(*e*) *Occupations of Males.* The next table gives the occupations of the males who committed suicide in 1925 :—

OCCUPATIONS OF MALES WHO COMMITTED SUICIDE.—AUSTRALIA, 1925.

Occupation.	Deaths.	Occupation.	Deaths.
Professional Class—		Industrial Class—	
Government, Defence, Law	8	Art and Mechanic Productions	27
Others	16	Textiles and Fibrous Materials	6
Domestic Class—		Food and Drinks	6
Board and Lodging	12	Animal and Vegetable Substances	2
Others	5	Metals and Minerals	9
Commercial Class—		Fuel, Light and Energy	2
Property and Finance	5	Building and Construction	23
Art, Mechanic and Textile Products	5	Others	154
Food and Drinks	22	Agricultural, Pastoral Mining, etc., Class—	
Animal and Vegetable Substances	3	Agricultural	90
Merchants and Dealers	15	Pastoral	34
Others	34	Mining and Quarrying	16
Transport and Communication Class—		Others	6
Railways	10	Independent Means	5
Roads and Trams	14	Dependents	3
Sea and Rivers	6	Occupation not stated	27
Others	4	Total	569

(*f*) *Frequency.* The rates show a fairly general increase from 99.07 per million during the years 1871–75 to a maximum of 131.17 per million for the period 1911–15, after which there was a decline, the rate in 1925 standing at 118.02.

SUICIDES.—AUSTRALIA, 1871–75 TO 1925.

Period.	Number of Suicides.			Suicides per One Million of Persons Living. Average Annual Rate.			Suicides of Females to 100 Suicides of Males. Based on—	
	Males.	Females.	Persons.	Males.	Females.	Persons.	Absolute Figures.	Rates.
1871–75	715	150	865	150.94	37.56	99.07	20.98	24.88
1876–80	878	145	1,023	159.69	31.06	100.62	16.51	19.45
1881–85	999	183	1,182	152.58	32.90	97.61	18.32	21.56
1886–90	1,394	292	(*a*) 1,686	179.20	43.97	(*c*) 116.92	20.95	24.54
1891–95	1,574	337	(*b*) 1,911	181.34	44.09	(*d*) 117.07	21.41	24.31
1896–1900	1,838	410	2,248	191.11	47.88	123.65	22.31	25.05
1901–05	2,054	380	2,434	201.78	40.88	124.98	18.50	20.26
1906–10	2,031	437	2,468	186.11	43.22	117.39	21.51	23.22
1911–15	2,546	577	3,123	206.15	50.36	131.17	22.66	24.43
1916–20	2,238	521	2,759	175.46	40.93	108.27	23.28	23.33
1921	510	111	621	183.89	41.33	113.76	21.76	22.47
1922	441	92	533	155.78	33.61	95.72	20.86	21.58
1923	492	107	599	169.81	38.33	105.29	21.75	22.57
1924	534	119	653	180.36	41.81	112.46	22.28	23.18
1925	569	131	700	187.89	45.13	118.02	23.02	24.02

(*a*) 1,705 inclusive of Western Australian figures. (*b*) 1,984 inclusive of Western Australian figures. (*c*) 116·49 inclusive of Western Australian figures. (*d*) 119·11 inclusive of Western Australian figures.

(xxxvii) *Other Diseases.* The number of causes included under this heading is very large, amounting to no less than 81 of the items shown in the detailed classification, and deaths were recorded under each of these with the exception of the following :—Glanders, rabies, soft chancre, pellagra, other diseases of digestive system, and amputation. The total number of deaths under " other diseases " in 1921 was 8,279, viz., 4,668 males and 3,611 females ; in 1922, 7,856, viz., 4,488 males and 3,368 females ; in 1923, 8,203, viz., 4,712 males and 3,491 females ; in 1924, 8,400, viz., 4,821 males and 3,579 females ; and in 1925, 7,924, viz., 4,640 males and 3,284 females. Some of the diseases included here account for very considerable numbers of deaths. Particulars for 1925 are shown in the following table :—

DEATHS FROM "OTHER DISEASES."—AUSTRALIA, 1925.

Causes.	M.	F.	Total.
Anthrax	1	..	1
Tetanus..	70	15	85
Mycoses	6	1	7
Syphilis	88	38	126
Gonococcus Infection ..	2	..	2
Purulent Infection and Septicæmia	60	67	127
Other Infectious Diseases ..	3	..	3
Other Tumours (Tumours of the female genital organs excepted)	38	45	83
Acute Rheumatic Fever ..	116	120	236
Chronic Rheumatism and Gout	70	79	149
Scurvy	2	2	4
Beri-beri	8	..	8
Rickets	5	6	11
Diabetes	273	404	677
Anæmia, Chlorosis ..	208	225	433
Diseases of the Pituitary Gland	8	6	14
Exophthalmic Goitre ..	7	71	78
Other Diseases of the Thyroid Glands	9	39	48
Diseases of the Parathyroid Glands	3	2	5
Diseases of the Thymus Gland	10	9	19
Addison's Disease ..	14	8	22
Diseases of the Spleen ..	5	7	12
Leucæmia	55	42	97
Hodgkin's Disease ..	43	16	59
Acute and Chronic Alcoholism	136	24	160
Chronic Lead Poisoning ..	19	3	22
Chronic Organic Poisonings	7	..	7
Other General Diseases ..	43	50	93
Encephalitis	82	55	137
Locomotor Ataxia ..	72	13	85
Other Diseases of the Spinal Cord	102	77	179
Paralysis without specified cause	196	186	382
General Paralysis of the Insane	134	20	154
Other Forms of Mental Alienation	59	74	133
Epilepsy	113	81	194
Convulsions (non-puerperal)	3	7	10
Convulsions of Children under 5 years of age	89	57	146
Chorea	2	2	4
Neuralgia and Neuritis ..	12	19	31
Other Diseases of the Nervous System	235	172	407
Diseases of the Eye ..	2	2	4
Diseases of the Ear ..	55	28	83
Diseases of the Arteries, Aneurism, Atheroma ..	590	275	865
Embolism and Thrombosis (not cerebral)	51	49	100
Diseases of the Veins ..	10	18	28
Diseases of the Lymphatic System	4	5	9
Hæmorrhage (without specified cause)	8	1	9
Other Diseases of the Circulatory System	7	8	15
Diseases of the Mouth and its Associated Organs ..	20	10	30
Diseases of the Pharynx ..	23	30	53
Diseases of the Œsophagus	9	2	11
Ankylostomiasis	1	1	2
Intestinal Parasites ..	9	6	15
Other Diseases of the Intestines	39	14	53
Acute Yellow Atrophy of the Liver	4	7	11
Hydatid Tumours of the Liver	20	15	35
Biliary Calculi	49	103	152
Other Diseases of the Liver	93	109	202
Diseases of the Pancreas ..	29	28	57
Peritonitis (without specified cause)	56	56	112
Chyluria	1	..	1
Other Diseases of the Kidneys and their Adnexa ..	138	98	236
Calculi of Urinary Passages	37	22	59
Diseases of the Bladder ..	102	14	116
Other Diseases of the Urethra, Urinary Abscesses, etc. ..	37	..	37
Diseases of the Prostate ..	322	..	322
Non-venereal Diseases of the Male Genital Organs ..	8	..	8
Non-puerperal Diseases of the Breast	..	4	4
Gangrene	54	28	82
Furuncle	24	13	37
Phlegmon, Acute Abscess ..	55	42	97
Other Diseases of the Skin and Adnexa	33	21	54
Non-tuberculous Diseases of the Bones	73	36	109
Other Diseases of the Joints (Tuberculosis and Rheumatism excepted) ..	9	8	17
Other Diseases of the Organs of Locomotion ..	1	..	1
Other Diseases peculiar to Infancy	257	178	435
Lack of Care (Infants) ..	2	11	13
Total Deaths ..	4,640	3,284	7,924

(xxxviii) *Unspecified or Ill-defined Diseases.* The number of cases included under this heading was 721 in 1921, 665 in 1922, 691 in 1923, 735 in 1924, and 648 in 1925, of which 442 were males and 206 females. The detailed classification places these ill-defined diseases under two headings—sudden death, including syncope ; and unspecified or ill-defined causes, of which the following are specimens :—Heart failure, asthenia, anasarca, atrophy, exhaustion, dropsy, ascites, and general œdema, etc. In 1925, the number of deaths which came under the first of these categories was 63, and under the second, 585. It is inevitable that cases will occur regarding which the available information is insufficient to permit of a clear definition of the fatal disease in the certificate of death. In the majority of cases, however, there is little doubt that more satisfactory certificates might have been given.

16. Causes of Deaths in Classes.—The figures in the preceding sub-sections relate to specific causes of death, and are of greater value in medical statistics than a mere grouping under general headings. The classification under fifteen general headings adopted by the compilers of the International Nomenclature is, however, shown in the following table, together with the death rates and percentages on total deaths pertaining to those classes :—

DEATHS, DEATH RATES (*a*), ETC., IN CLASSES.—AUSTRALIA, 1925.

Class.	Total Deaths.			Death Rates. (*a*)			Proportion of 10,000 Deaths.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1. Epidemic, Endemic, and Infectious Diseases	3,196	2,478	5,674	106	85	96	1,026	1,058	1,041
2. General diseases not included above	4,011	3,703	7,714	132	128	130	1,288	1,580	1,415
3. Diseases of the Nervous System and of the Organs of Sense ..	2,801	2,423	5,224	92	83	88	899	1,034	957
4. Diseases of the Circulatory System	4,896	3,616	8,512	162	125	144	1,573	1,543	1,560
5. Diseases of the Respiratory System	3,384	2,357	5,741	112	81	97	1,087	1,006	1,052
6. Diseases of the Digestive Organs	2,456	1,894	4,350	81	65	73	789	808	797
7. Diseases of the Genito-Urinary System and Adnexa	2,394	1,532	3,926	79	53	66	769	654	719
8. Puerperal Condition	..	766	766	..	26	13	..	327	140
9. Diseases of the Skin and of the Cellular Tissue	166	104	270	5	4	4	53	44	49
10. Diseases of the Bones and Organs of Locomotion	83	44	127	3	2	2	27	19	23
11. Malformations	314	272	586	10	9	10	101	116	107
12. Early Infancy	2,029	1,521	3,550	67	52	60	652	649	651
13. Old Age	1,903	1,660	3,563	63	57	60	611	708	652
14. External Causes	3,059	858	3,917	101	30	66	983	366	718
15. Ill-defined Diseases	442	206	648	15	7	11	142	88	119
Total	31,134	23,434	54,568	1,028	807	920	10,000	10,000	10,000

(*a*) Number of deaths per 100,000 of mean population.

17. Ages at Death of Married Males and Females, and Issue.—Bulletin No. 43 " Australian Demography " contains a number of tables showing the age at marriage, age at death, duration of life after marriage, birthplaces, and occupations, in combination with the issue of married persons who died in Australia in 1925. A summary of those tables is given hereunder. Deaths of married males in 1925 numbered 17,118, and of married females, 15,293. The tabulations which follow deal, however, with only 16,620 males and 14,984 females, the information in the remaining 807 cases being incomplete. The total number of children in the families of the 16,620 males was 79,190; and of the 14,984 females, 74,506. The average number of children is shown for various age-groups in the following table :—

AGES AT DEATH OF MARRIED MALES AND FEMALES, AND AVERAGE ISSUE.—AUSTRALIA, 1925.

Age at Death.	Average Family of Males.	Average Family of Females.	Age at Death.	Average Family of Males.	Average Family of Females.
Under 20 years ..	0.50	0.51	70 to 74 years ..	5.69	5.99
20 to 24 years ..	0.61	0.97	75 „ 79 „ ..	6.27	6.42
25 „ 29 „ ..	1.32	1.64	80 „ 84 „ ..	6.60	6.70
30 „ 34 „ ..	1.86	2.49	85 „ 89 „ ..	6.88	6.65
35 „ 39 „ ..	2.50	3.14	90 „ 94 „ ..	7.01	6.91
40 „ 44 „ ..	2.99	3.44	95 „ 99 „ ..	6.98	6.74
45 „ 49 „ ..	3.40	3.67	100 years and upwards	7.12	6.00
50 „ 54 „ ..	3.72	3.81	Age unspecified ..	..	9.00
55 „ 59 „ ..	4.05	4.26			
60 „ 64 „ ..	4.56	4.89			
65 „ 69 „ ..	5.21	5.73	All ages ..	4.76	4.97

The figures in the preceding table include the issue both living and dead, the proportion between them, taking the issue of deceased males and females together, being about 1,000 to 279. The totals are shown in the following table :—

ISSUE OF MARRIED MALES AND FEMALES.—AUSTRALIA, 1925.

Issue of Married Males.	Males.	Females.	Total.	Issue of Married Females.	Males.	Females.	Total.
Living ..	31,492	31,888	63,380	Living ..	28,334	28,460	56,794
Dead ..	8,935	6,875	15,810	Dead ..	9,849	7,863	17,712
Total ..	40,427	38,763	79,190	Total ..	38,183	36,323	74,506

These figures show a masculinity in the issue of 2.29, which is in harmony with the experience of the birth statistics.

18. **Ages at Marriage of Deceased Males and Females, and Issue.**—While the table giving the average families of married males and females naturally shows an increase in the averages with advancing ages at death, the following table, which gives the average families of males and females according to the age at marriage of the deceased parents, shows a corresponding decrease in the averages as the age at marriage advances :—

AGES AT MARRIAGE OF DECEASED MALES AND FEMALES, AND AVERAGE ISSUE.—AUSTRALIA, 1925.

Age at Marriage.	Average Family of Males.	Average Family of Females.
Under 20 years ..	6.63	6.95
20 to 24 ,, ..	5.72	5.45
25 ,, 29 ,, ..	4.98	3.92
30 ,, 34 ,, ..	4.17	2.56
35 ,, 39 ,, ..	3.42	1.28
40 ,, 44 ,, ..	2.82	0.46
45 ,, 49 ,, ..	1.90	0.04
50 to 54 years ..	1.75	..
55 ,, 59 ,, ..	1.03	..
60 ,, 64 ,, ..	0.73	..
65 years and upwards	1.03	..
Age unspecified ..	4.90	5.30
All ages ..	4.76	4.97

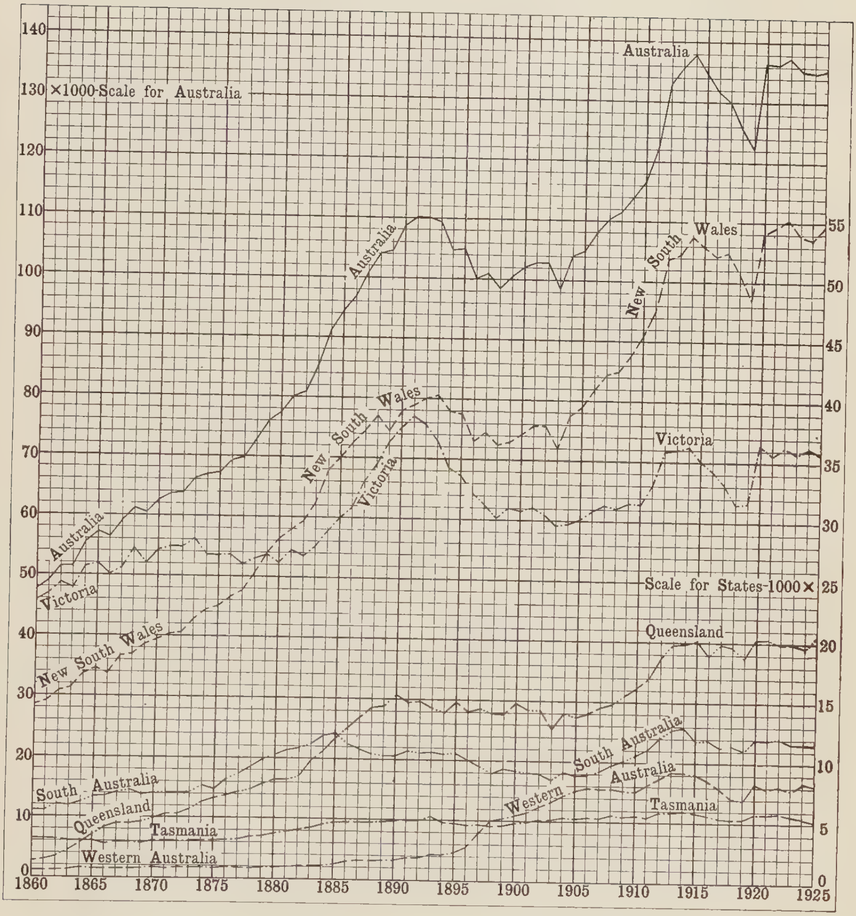
19. **Duration of Life after Marriage of Males and Females.**—The duration of life after marriage has been tabulated for males and females both in combination with the age at marriage, and with the total and average issue. The tables containing the results do not, however, lend themselves to condensation, and are, therefore, omitted here. They will be found in Bulletin No. 43 of "Australian Demography."

20. **Birthplaces of Deceased Married Males and Females, and Issue.**—The following table shows the birthplaces of married males and females who died in 1925, together with their average issue. No generalizations can, of course, be made in those cases in which the number of deaths was small, but where the figures are comparatively large, as in the case of natives of Australia, differences occur between the averages of the individual States, which appear inexplicable on any other ground than that of different age constitution of the locally born population of the various States due to the different dates of the foundation of settlement. Thus, New South Wales and Tasmania, owing to their early settlement, contain a larger number of locally-born inhabitants of advanced ages than Victoria and Queensland, in which colonization was begun almost fifty years after the foundation of New South Wales. It will be noted that the differences occur both in the male and female averages.

BIRTHPLACES OF DECEASED MARRIED MALES AND FEMALES, AND AVERAGE ISSUE.—AUSTRALIA, 1925.

Birthplace.	Married Males.		Married Females.	
	Deaths.	Average Family.	Deaths.	Average Family.
New South Wales ..	3,339	4.79	3,249	4.96
Victoria	3,143	4.15	2,826	4.08
Queensland ..	618	3.98	696	3.98
South Australia ..	1,185	4.71	1,122	4.67
Western Australia ..	138	4.41	156	4.30
Tasmania	656	5.16	660	5.11
Northern Territory	..	..	1	2.00
Federal Capital Territory	1	4.00	2	13.00
New Zealand ..	135	3.36	123	3.28
England and Wales	3,933	5.02	3,198	5.45
Scotland	1,020	5.01	784	5.60
Ireland	1,282	5.70	1,575	5.85
Other British Possessions in Europe ..	30	4.23	20	4.25
Denmark	91	5.04	38	4.76
France	37	3.59	17	4.53
Germany	332	5.86	254	6.81
Italy	67	3.67	19	4.53
Norway	35	4.31	9	4.78
Poland	39	4.41	9	5.44
Russia	29	3.69	15	5.27
Sweden	61	3.34	10	7.00
Other European Countries	84	4.17	26	5.00
British India and Ceylon ..	45	5.31	18	2.56
China	61	3.77	2	4.00
Syria	16	4.81	5	5.20
Other Asiatic Countries	9	3.11	2	1.50
Union of South Africa	14	2.64	9	5.44
Other African Countries	6	4.83	6	2.83
Canada	33	3.91	17	5.94
United States ..	52	4.88	23	3.52
Other American Countries ..	17	3.88	6	4.50
Polynesian Islands	19	3.32	4	5.25
At Sea	52	5.69	46	5.96
Unspecified ..	41	3.44	37	4.70
Total ..	16,620	4·76	14,984	4·97

BIRTHS—1860 TO 1925.

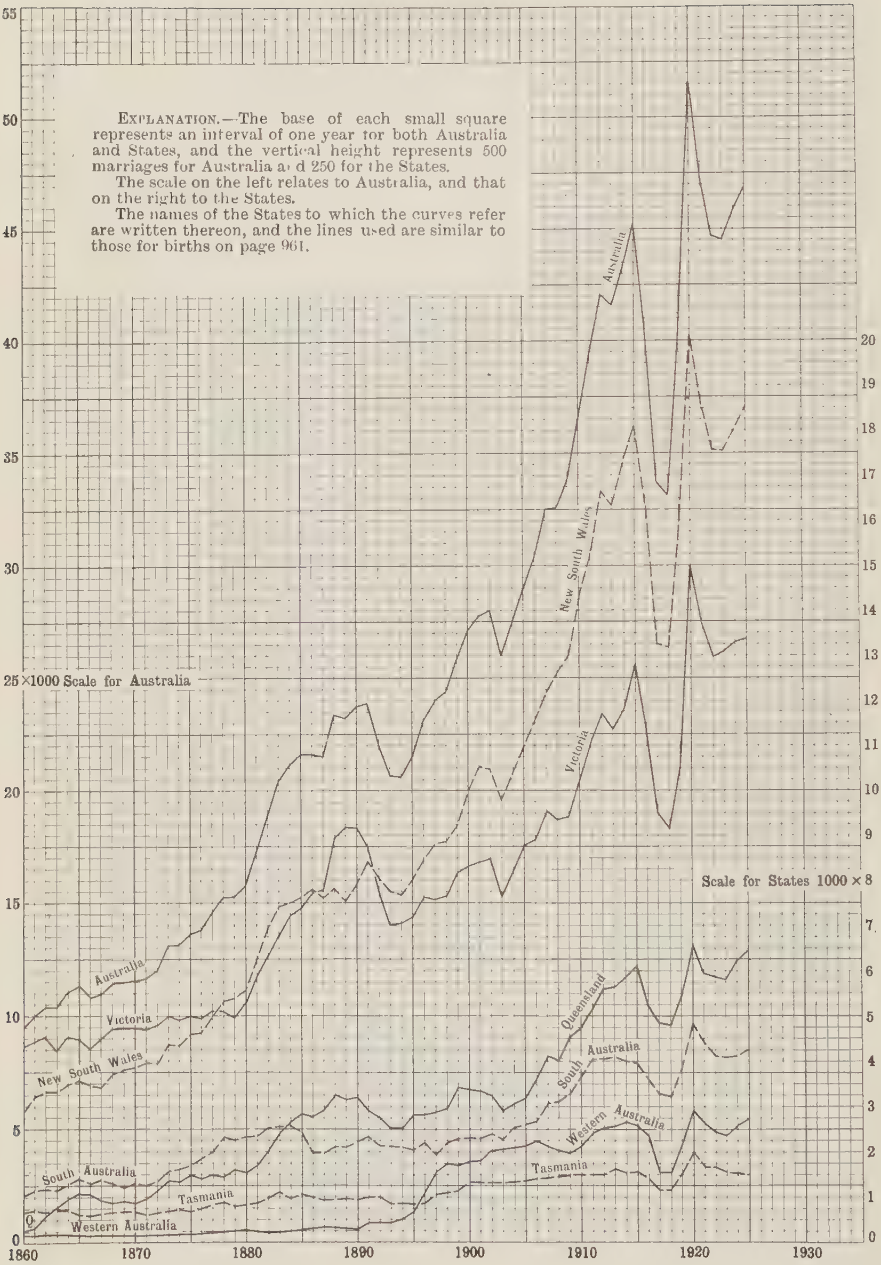


EXPLANATION.—The base of each small square represents an interval of one year for both Australia and States, and the vertical height represents 2,000 persons for Australia and 1,000 for the States.

The scale on the left relates to Australia, and that on the right to the States.

The names of the States to which the curves refer are written thereon, and the characters of the lines used are as follows:—Australia, ————————; New South Wales, — — — — — — —; Victoria, — - — - — - - - —; Queensland, — — — — — - - — —; South Australia, — - - — - - — - - - -; Western Australia, — — — - — — — - — — — Tasmania, — — - — — - — — - — —.

MARRIAGES, 1860 TO 1925.



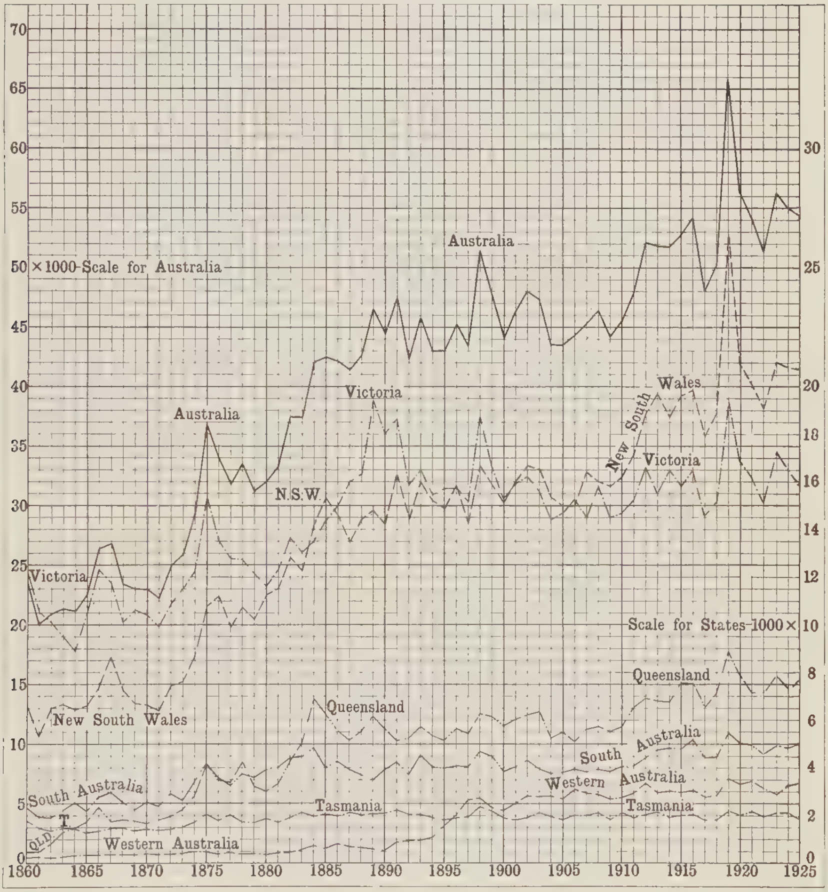
Explanation.—The base of each small square represents an interval of one year for both Australia and States, and the vertical height represents 500 marriages for Australia and 250 for the States.

The scale on the left relates to Australia, and that on the right to the States.

The names of the States to which the curves refer are written thereon, and the lines used are similar to those for births on page 961.

25×1000 Scale for Australia
Scale for States 1000×
0
5
10
15
20
25
30
35
40
45
50
55
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
1860
1870
1880
1890
1900
1910
1920
1930
Australia
Victoria
New South Wales
Queensland
South Australia
Western Australia
Tasmania
Q

DEATHS—1860 TO 1925.

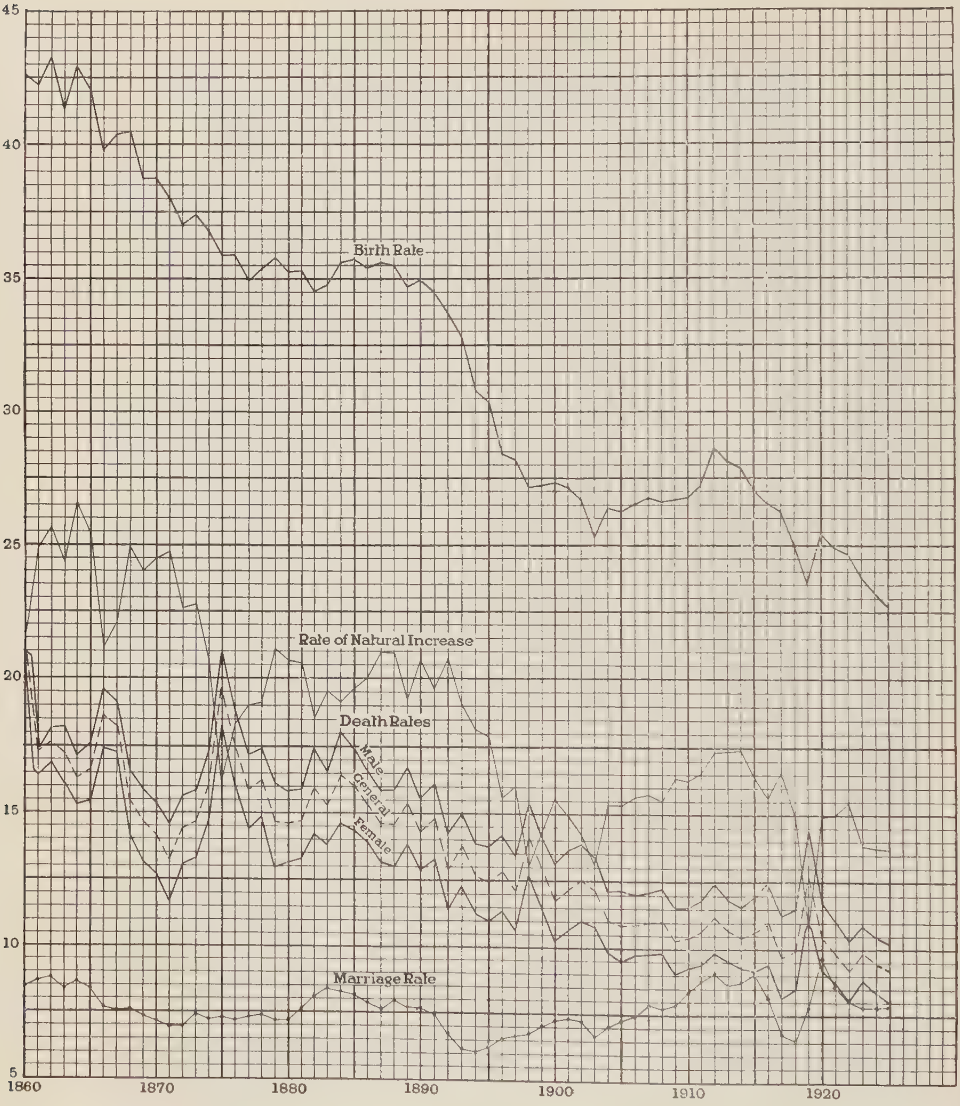


EXPLANATION.—The base of each small square represents an interval of one year for both Australia and States, and the vertical height represents 1,000 persons for Australia and 500 for the States.

The scale on the left relates to Australia, and that on the right to the States.

The names of the States to which the curves refer are written thereon, and the lines used are similar to those for births on page 961.

GENERAL BIRTH, NATURAL INCREASE, DEATH (MALE, GENERAL AND FEMALE) AND MARRIAGE RATES—AUSTRALIA, 1860 TO 1925.



EXPLANATION.—The base of each small square represents one year's interval, and the vertical height one half per thousand of the population—the basic line being five per thousand of the population.

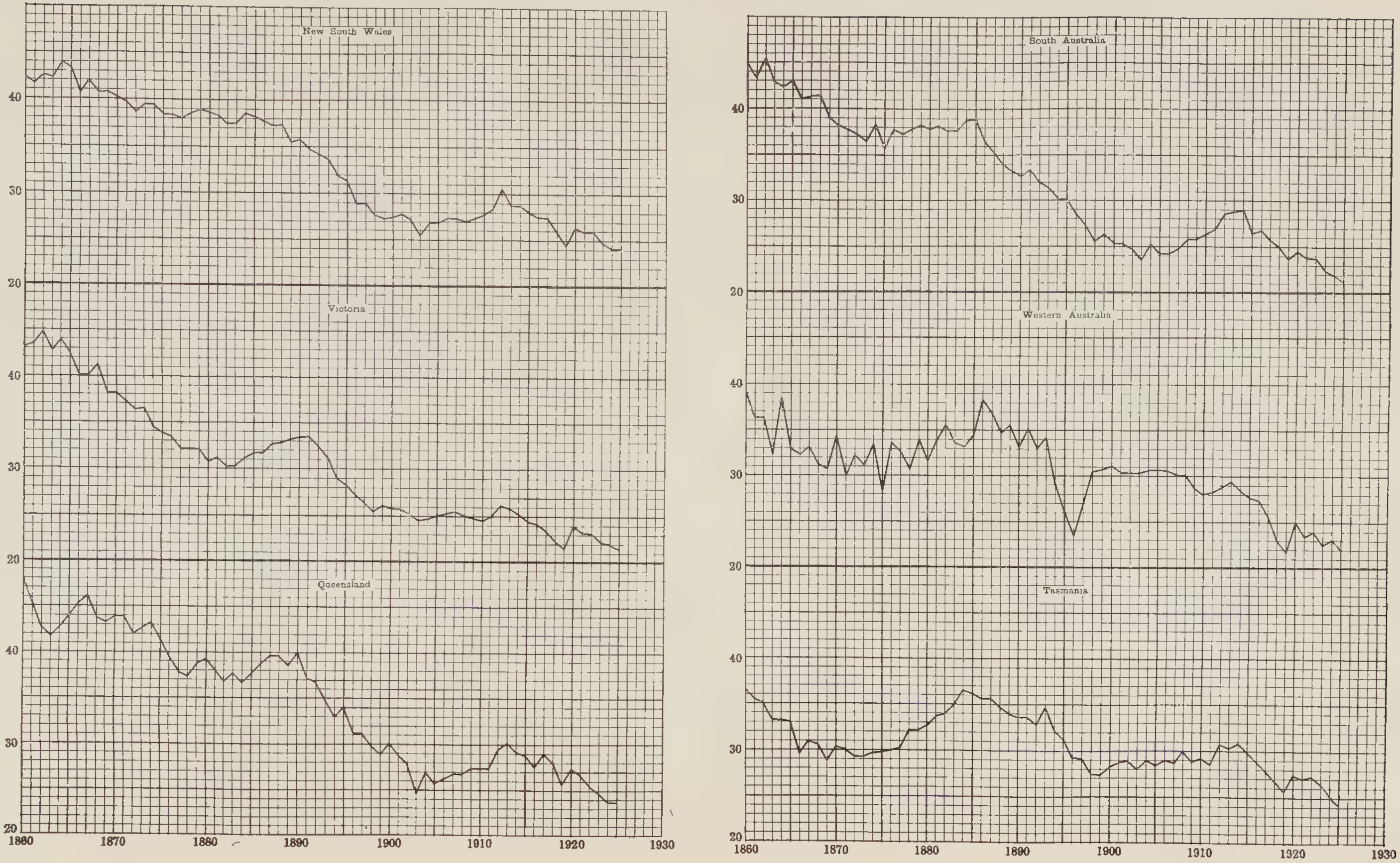
STATE BIRTH-RATE GRAPHS. (See page 965.)

EXPLANATION.—The base of each small square represents one year's interval, and the vertical height one birth per thousand of the population—the basic line for each State being twenty per thousand of the population.

STATE DEATH-RATE GRAPHS. (See page 966.)

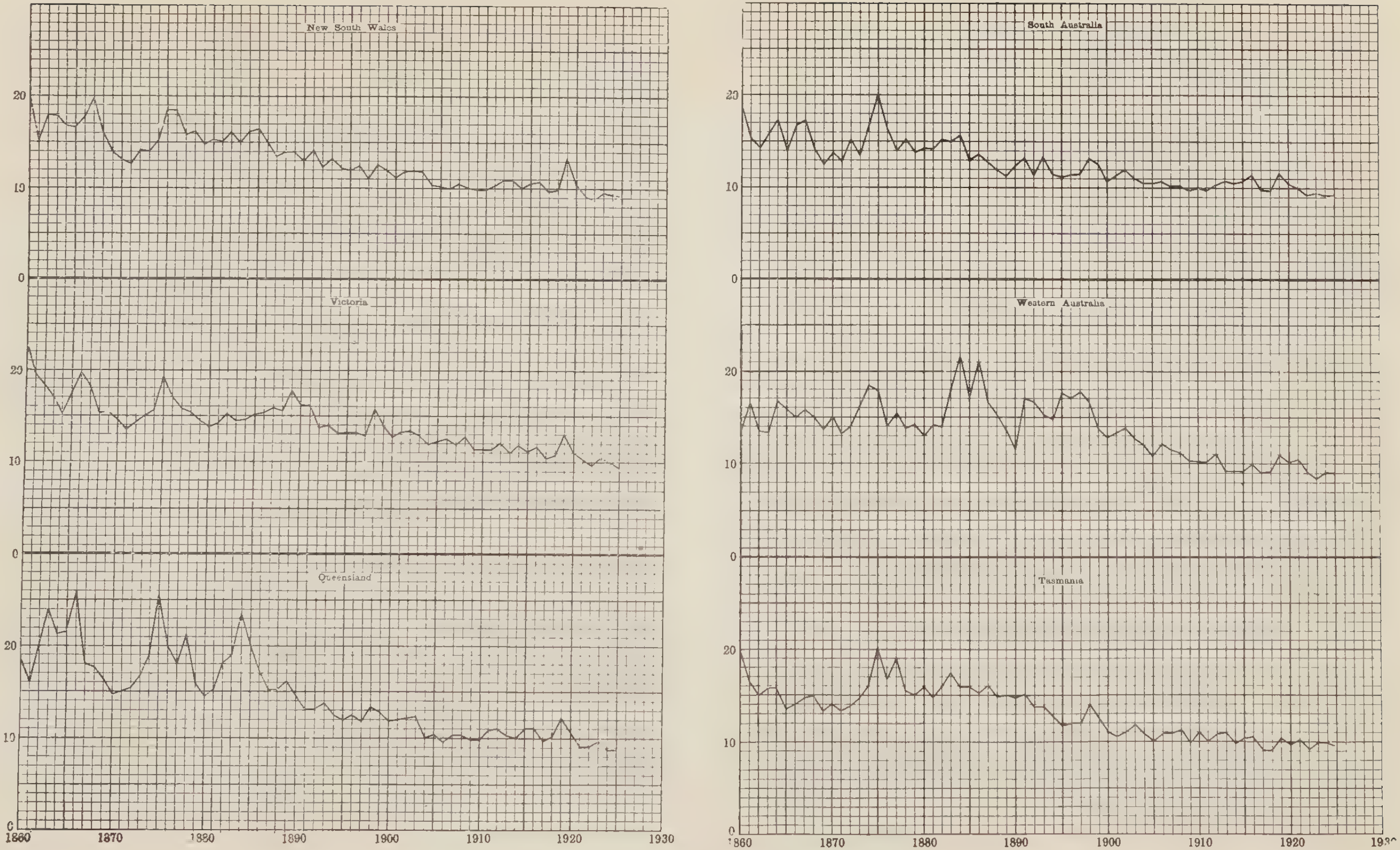
EXPLANATION.—The base of each small square represents one year's interval, and the vertical height one death per thousand of the population. The zero for each State is shown by a thickened line.

BIRTH RATES—STATES, 1860-1925.



For explanation of above graph see page 964.

DEATH RATES—STATES, 1860-1925.



For explanation of above graph see page 964.

21. Occupations of Deceased Married Males, and Issue.—The following tabulation shows the average issue in combination with the occupation of deceased males.

OCCUPATIONS OF DECEASED MARRIED MALES AND AVERAGE ISSUE.—AUSTRALIA, 1925.

Occupation.	Deaths of Married Males.	Average Family.	Occupation.	Deaths of Married Males.	Average Family.
PROFESSIONAL CLASS—			INDUSTRIAL CLASS—		
Government, Defence, and Law	426	4.11	Art and Mechanic Products	791	4.30
Others	609	3.80	Textiles and Fibrous Materials	363	4.71
DOMESTIC CLASS—			Food and Drinks ..	243	4.81
Board and Lodging ..	323	3.72	Animal and Vegetable Substances	55	5.60
Others	256	3.76	Metal and Minerals ..	464	5.03
COMMERCIAL CLASS—			Fuel, Light, and Energy ..	81	3.70
Property and Finance ..	261	3.91	Building and Construction ..	1,106	4.77
Art, Mechanic and Textile Products	156	3.80	Others	2,937	4.83
Food and Drinks ..	458	4.32	AGRICULTURAL, PASTORAL, MINING, ETC., CLASS—		
Animal and Vegetable Substances	93	4.25	Agricultural	2,613	5.98
Fuel, Light and Metals ..	53	4.94	Pastoral	686	5.28
Merchants and Dealers ..	467	4.23	Mining and Quarrying ..	823	5.05
Others	777	3.40	Others	140	4.69
TRANSPORT AND COMMUNICATION CLASS—			INDEPENDENT MEANS ..	481	5.27
Railways	470	4.78	DEPENDENTS	27	3.70
Roads and Trams ..	533	4.32	OCCUPATION NOT STATED ..	417	4.92
Sea and Rivers ..	386	3.81			
Others	125	4.58	Total	16,620	4.76

§ 4. Australian Life Tables.

1. General.—Numerous Australian life tables based on the general populations of States, parts of States or groups of States, have been constructed at various times, as have also certain other tables based on the selected data derived from the experience of Life Assurance Societies, Friendly Societies, and the Public Service. A short account of these tables up to and including those constructed in connexion with the Census of 1911 will be found in Volume I. of the Australian Census of 1911, p. 293. Briefly it may be said that the Australian life tables derived from selected data are somewhat meagre, and out of date, and that of those based on general population, all relating to periods prior to 1911 have been practically superseded by the tables compiled in connexion with the Census of 1911.

2. Life Tables of Census of 1911.—In connexion with the Census of 1911, the mortality of the Australian population for the thirty years 1881 to 1910 inclusive was investigated, separate tables being compiled for each State and for Australia as a whole in respect of each sex for each of the decennial periods 1881–90, 1891–1900, and 1901–10. These compilations represented in all forty-two separate life tables and furnished a comprehensive view of Australian mortality in respect of sex, of time, and of geographical distribution. Full tabulations are given in Volume III. of the Australian Census of 1911, pp. 1209–1278. In addition monetary tables based on the experience for the whole of Australia for the decennium 1901–1910 were published, " Australian Life Tables 1901–10 " in 1914, and " Australian Joint Life Tables 1901–10 " in 1917.

3. **Life Tables of Census of 1921.**—In connexion with the Census of 1921 Life Tables have been constructed in respect of each sex for Australia as a whole, and these together with monetary tables on single lives based thereon have been published in Volume II. of the Australian Census of 1921, pp. 1838–1889. Tables in respect of the several States are in course of preparation. For the sake of uniformity with previous tables it would have been desirable to take the decennium 1911–1920 as the basis for deaths recorded, but the exceptional nature of this period owing to the war upheaval of 1914–18 and the influenza epidemic of 1919 rendered the experience of that decennium far from normal. It was consequently decided to base the life tables of the 1921 Census on the population recorded at that Census and the deaths recorded in the three years 1920, 1921 and 1922.

4. **Comparisons of Numbers Surviving.**—The following table furnishes a comparison of the numbers of males and females respectively surviving at each age out of 100,000 of each sex born, according to the experience of the different periods specified :—

AUSTRALIAN LIFE TABLES.—COMPARATIVE NUMBER OF SURVIVORS.

Age.	Number Surviving (l_x) at each Age out of 100,000 born according to experience for period.							
	Male Lives.				Female Lives.			
	1881–1890.	1891–1900.	1901–1910.	1920–1922.	1881–1890.	1891–1900.	1901–1910.	1920–1922.
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
5	81,281	84,047	87,585	90,283	83,090	85,842	89,285	92,148
10	79,700	82,781	86,622	89,389	81,643	84,606	88,395	91,314
15	78,696	81,845	85,789	88,685	80,677	83,792	87,619	90,753
20	76,630	80, 49	84,493	87,697	79,099	82,473	86,459	89,906
25	73,665	78,229	82,802	86,318	76,782	80,657	84,875	88,640
30	70,531	75,706	80,844	84,743	73,862	78,329	82,909	87,086
35	67,457	72,942	78,607	82,992	70,811	75,577	80,618	85,330
40	64,106	69,788	75,887	80,813	67,453	72,487	78,001	83,279
45	60,239	66,228	72,479	78,040	63,876	69,498	75,103	81,024
50	55,606	62,014	68,221	74,330	59,978	66,095	71,945	78,313
55	50,039	56,833	63,107	69,650	55,479	61,977	68,199	74,793
60	43,483	50,205	56,782	63,386	50,039	56,617	63,247	70,150
65	36,134	41,887	48,670	54,886	43,631	49,567	56,256	63,857
70	27,291	32,134	38,275	44,332	34,877	40,943	46,793	54,771
75	18,706	22,341	25,962	31,911	25,765	30,587	34,479	42,214
80	10,438	12,568	14,330	18,614	15,691	18,631	21,353	27,170
85	4,464	5,225	5,995	7,916	6,991	8,636	10,527	13,118
90	1,328	1,501	1,652	2,141	2,095	2,833	3,566	4,238
95	243	276	244	306	402	581	687	774
100	22	25	15	17	42	52	56	62

According to the table for 1920–22, 54.9 per cent. of the males born reach age 65 and 18.6 per cent. reach 80 as compared with 36.1 per cent. reaching 65 and 10.4 per cent. reaching 80 according to the table for 1881–1890.

A similar improvement is shown in the case of female lives, as 63.9 per cent. of those born reach age 65 and 27.2 per cent. reach age 80 according to the 1920–22 table, whereas only 43.6 per cent. of those born reached age 65 and 15.7 per cent. reached age 80, according to the table for 1881–1890.

The greater vitality of female lives is in evidence in all the tables.

5. **Comparison of Rates of Mortality.**—The next table gives a similar comparison of the rate of mortality per annum experienced at quinquennial ages in each sex for each period. These rates form the bases of the several life tables.

AUSTRALIAN LIFE TABLES.—COMPARATIVE RATES OF MORTALITY.

Age.	Rate of Mortality per 1,000 per annum (1,000 q_x) at each age experienced during period.							
	Male Lives.				Female Lives.			
	1881–1890.	1891–1900.	1901–1910.	1920–1922.	1881–1890.	1891–1900.	1901–1910.	1920–1922.
0	132.48	118.40	95.10	71.32	115.72	101.39	79.53	55.68
5	5.37	3.98	2.81	2.52	4.98	3.88	2.58	2.40
10	2.53	2.25	1.79	1.56	2.39	2.00	1.59	1.27
15	3.72	2.90	2.55	1.84	2.99	2.48	2.19	1.44
20	7.14	4.73	3.70	2.84	5.28	3.88	3.29	2.52
25	8.62	6.17	4.48	3.55	7.02	5.33	4.30	3.27
30	8.67	6.98	5.19	3.90	8.28	6.52	5.19	3.87
35	9.51	8.21	6.33	4.75	9.01	7.98	6.17	4.50
40	11.29	9.69	8.16	6.17	10.40	8.37	7.18	5.24
45	14.24	11.83	10.83	8.44	11.67	9.17	8.07	6.06
50	18.61	15.22	13.95	11.58	13.99	11.42	9.56	8.08
55	24.74	21.07	18.16	15.52	18.18	15.42	12.77	11.03
60	32.30	30.27	25.84	24.07	23.95	22.45	19.20	15.71
65	45.82	44.96	38.59	35.52	35.50	32.39	29.98	24.26
70	64.16	60.54	61.62	52.90	52.19	46.72	47.77	40.90
75	92.72	90.11	96.10	83.40	76.37	76.30	77.79	68.20
80	136.46	138.39	137.95	133.40	124.47	122.35	113.33	112.30
85	188.95	196.29	197.01	195.80	187.79	174.63	164.59	172.00
90	256.90	258.38	277.36	283.00	253.59	239.99	242.21	251.00
95	337.23	334.83	381.11	384.00	324.87	325.67	341.45	347.00
100	473.92	481.14	525.36	530.00	452.82	501.91	500.73	501.00

Amongst male lives, at most ages under 35 the rate of mortality in 1920–22 was approximately half or was less than half the corresponding rate in 1881–90. Amongst female lives a similar relation held for ages under 40. From these points onwards the rates of mortality for 1920–22 gradually approach those for 1881–1890, being about 80 per cent. at age 70 and about 90 per cent. at age 75. At age 82 the male rate for 1920–22 becomes greater than that for 1881–1890, and the female rate becomes similarly greater at age 91.

6. **Australian Life Tables.—Comparative Expectation of Life ($\overset{\circ}{e}_x$).**—" The expectation of Life " at any age, or as it might be more correctly expressed, " the average future life time " at such age gives a comprehensive view of the trend and effect of the whole of that portion of the life table beyond the age in question. Thus the expectation of life at date of birth by any life table represents the average number of years of life lived according to that table by each person born.

A comparison of such expectations for the several Australian tables is furnished hereunder :—

AUSTRALIAN LIFE TABLES.—EXPECTATION OF LIFE.($\overset{\circ}{e}_x$)

Age.	Expectation of Life ($\overset{\circ}{e}_x$) at each age according to experience of period.							
	Male Lives.				Female Lives.			
	1881–1890.	1891–1900.	1901–1910.	1920–1922.	1881–1890.	1891–1900.	1901–1910.	1920–1922.
0	47.199	51.076	55.200	59.148	50.844	54.756	58.837	63.311
5	52.855	55.609	57.913	60.432	55.995	58.637	60.796	63.635
10	48.861	51.426	53.532	56.014	51.949	54.462	56.385	59.196
15	44.451	46.984	49.026	51.439	47.541	49.966	51.861	54.546
20	40.575	42.809	44.737	46.988	43.434	45.722	47.521	50.034
25	37.104	38.898	40.599	42.697	39.667	41.692	43.360	45.712
30	33.642	35.110	36.520	38.444	36.133	37.855	39.327	41.482
35	30.061	31.344	32.486	34.201	32.582	34.140	35.371	37.283
40	26.499	27.645	28.557	30.053	29.077	30.488	31.473	33.138
45	23.035	23.994	24.778	26.028	25.564	26.691	27.589	28.990
50	19.740	20.450	21.163	22.196	22.060	22.933	23.688	24.903
55	16.649	17.077	17.670	18.514	18.640	19.285	19.847	20.952
60	13.774	13.988	14.348	15.082	15.387	15.863	16.195	17.166
65	11.056	11.252	11.306	12.014	12.268	12.749	12.879	13.597
70	8.815	8.900	8.670	9.261	9.698	9.892	9.955	10.412
75	6.715	6.698	6.580	6.870	7.237	7.367	7.586	7.733
80	5.106	4.997	4.960	5.001	5.272	5.486	5.731	5.611
85	3.864	3.785	3.654	3.622	3.897	4.121	4.188	4.056
90	2.906	2.908	2.639	2.598	2.975	3.068	2.990	2.911
95	2.157	2.159	1.883	1.864	2.252	2.177	2.095	2.072
100	1.315	1.293	1.180	1.170	1.373	1.233	1.240	1.240

In each table the female expectation of life at date of birth exceeds the male, the excess being 3.645 years in the 1881–1890 table, 3.680 years in the 1891–1900 table, 3.637 years in the 1901–1910 table, and 4.163 years in that for 1920–1922. Taking the expectation of life at date of birth as a measure of the life efficiency of those born, it may be said that the experience of 1920–22 indicates a life efficiency about 25 per cent. in excess of that for the period 1881–1890.

7. **Comparisons of Rates of Mortality with other Countries.**—The next table furnishes a comparison of rates of mortality at decennial ages with certain other countries :—

COMPARISON OF RATES OF MORTALITY (1,000 q_x).

Age.	Rate of Mortality per 1,000 per annum at each Age specified.					
	Australia.	New Zealand.	Union of South Africa.	England and Wales.	U.S.A.	Japan.
	1920–1922.	1911–1915.	1920–1922.	1910–1912.	1909–1911.	1908–1913.
			MALE LIVES.			
0	71.32	60.50	87.84	120.44	124.95	160.50
10	1.56	1.38	2.00	1.93	2.42	3.20
20	2.84	2.91	3.94	3.48	5.03	8.87
30	3.90	3.77	4.98	4.78	6.81	7.73
40	6.17	6.03	8.17	8.11	10.46	9.59
50	11.58	10.68	13.45	14.82	15.81	16.40
60	24.07	21.63	25.96	30.42	31.04	32.84
70	52.90	49.70	56.33	64.70	62.40	69.78
80	133.40	135.02	119.90	142.99	135.64	145.72
90	283.00	292.15	235.02	273.95	253.85	305.77

COMPARISON OF RATES OF MORTALITY (1,000 q_x)—*continued.*

Age.	Rate of Mortality per 1,000 per annum at each Age specified.					
	Australia.	New Zealand.	Union of South Africa.	England and Wales.	U.S.A.	Japan.
	1920–1922.	1911–1915.	1920–1922.	1910–1912.	1909–1911.	1908–1913.
	FEMALE LIVES.					
0	55.68	47.05	73.88	97.67	103.77	145.04
10	1.27	1.30	1.64	1.96	2.11	3.96
20	2.52	2.46	3.34	2.95	4.35	10.79
30	3.87	3.95	5.06	4.11	6.20	9.83
40	5.24	5.62	6.20	6.60	8.25	10.65
50	8.08	8.87	9.45	11.40	12.83	12.96
60	15.71	17.91	18.66	23.10	26.13	24.69
70	40.90	44.60	45.64	52.59	56.79	56.56
80	112.30	113.06	119.99	124.19	125.66	124.10
90	251.00	234.21	238.34	238.26	245.38	275.30

In view of the marked improvement with time shown in the successive Australian tables, the comparisons here made do not furnish reliable evidence of the relative mortality rates of the countries except in the case of Australia and South Africa on the one hand, and of England, U.S.A. and Japan on the other. New Zealand in point of time occupies a position between these two sets. The close similarity at all ages except the earliest between Australia and New Zealand is striking, and suggests that a New Zealand table for 1920–22 would show much better results than the corresponding table for Australia.

8. **Comparisons of Expectation of Life with Other Countries.**—Corresponding comparisons of expectation of life are furnished hereunder :—

COMPARISONS OF EXPECTATION OF LIFE ($\mathring{e}_x$).

Age.	Expectation of Life at Age specified.					
	Australia.	New Zealand.	Union of South Africa.	England and Wales.	U.S.A.	Japan.
	1920–1922.	1911–1915.	1920–1922.	1910–1912.	1909–1911.	1908–1913.
	MALE LIVES.					
0	59.1	61.0	55.6	51.5	49.9	44.3
10	56.0	56.5	54.0	53.1	51.1	48.8
20	47.0	47.6	45.3	44.2	42.5	41.1
30	38.4	39.0	37.1	35.8	34.7	34.3
40	30.1	30.7	29.2	27.7	27.3	26.8
50	22.2	22.8	21.9	20.3	20.3	19.6
60	15.1	15.5	15.1	13.8	14.0	13.3
70	9.3	9.3	9.5	8.5	8.8	8.3
80	5.0	5.0	5.6	4.9	5.1	4.7
90	2.6	2.5	3.1	2.9	3.0	2.4
	FEMALE LIVES.					
0	63.3	63.5	59.2	55.4	53.2	44.7
10	59.2	58.3	57.0	55.9	53.3	48.5
20	50.0	49.1	48.2	47.1	44.7	41.7
30	41.5	40.5	39.9	38.5	36.8	35.7
40	33.1	32.3	31.9	30.3	29.2	29.0
50	24.9	24.2	24.0	22.5	21.7	21.8
60	17.2	16.7	16.6	15.5	14.9	15.0
70	10.4	10.1	10.4	9.6	9.4	9.3
80	5.6	5.9	5.8	5.5	5.4	5.3
90	2.9	3.0	3.2	3.2	3.1	2.6

In comparing the expectations given above, the discrepancies between the dates of the several experiences to which attention has been drawn in paragraph 7 should be borne in mind. The Australian and New Zealand expectations are relatively close in both sexes, the New Zealand results being the better in the case of male lives, while the Australian results are the better in the case of females. From age 50 onwards in both sexes there is marked similarity between the Australian, the New Zealand and the South African results. Similarly from age 50 onwards the results for England and Wales, U.S.A. and Japan are in fair accord. The marked predominance of Australia and New Zealand over the other countries is in the first ten years of life, and in this period New Zealand has a predominance over Austrália.

§ 5. Graphical Representation of Vital Statistics.

1. **General.**—The progressive fluctuations of the numbers of births, marriages, and deaths are important indexes of the economic conditions and social ideals of a community. Graphs have accordingly been prepared which show these fluctuations. It should be remembered, however, that, normally, the increase of births and marriages should be proportional to the growth of population.

2. **Graphs of Annual Births, Marriages, and Deaths.**—The outstanding features of the graph representing births are :—An almost continuous rise in the numbers from 1860 to 1891 ; a decline till 1898, associated with the commercial crisis of 1891–3 ; a sharp fall in 1903 which accompanied a severe drought ; an uninterrupted increase from 1903 to 1914, the total for 1914 being the highest recorded ; a rapid decline until 1920, the result of war conditions. The figures for the last five years show a tendency to return to normal.

The graph for marriages up to 1914 discloses approximately the same features as that for births—financial crises and droughts having a similar effect. The numbers for 1914 and 1915 showed a considerable increase over previous years. From 1916 to 1918 there was a rapid fall, the numbers being much below those of pre-war years. During 1919 and 1920 the recovery was very rapid, the total for the latter year being the highest ever recorded. The totals for 1921 to 1925 were not so favourable.

The characteristic feature of the graph of deaths is its irregular nature. On the whole, however, there is an increase which is due to the growth of population.

3. **Graphs of Annual Births, Marriages, and Death Rates, and Rate of Natural Increase.**—The graph of the birth rate indicates a well-marked decline throughout the whole period. This reduction of rate has been subject to fluctuations, there being two periods of arrested decline, viz., from 1877 to 1890, and from 1903 to 1912.

The variations in the marriage rates, though less abrupt than those in the birth and death rates, have ranged from a minimum of 6.08 per 1,000 which marked the culmination of a commercial depression to a maximum of 9.62 per 1,000 in 1920.

On the whole, the graph for the death rate furnishes clear evidence of a satisfactory decline during the period. The graph brings into prominence six years in which the rates were very high when compared with adjacent years, viz., 1860, 1866, 1875, 1884, 1898, and 1919. Epidemics of measles were largely responsible for the high rates in the first five years, while influenza caused the increase during 1919.

The graph of natural increase shows roughly the same variations as that for the birth rate, but the influence of the death rate is indicated by the very low rates of natural increase for 1875, 1898, and 1919, which resulted from the exceptionally high death rates of those years.

CHAPTER XXVI.

MISCELLANEOUS.

§ 1. Patents, Trade Marks, and Designs.

1. Patents.—(i) *General.* The granting of patents is regulated by the Commonwealth Patents Act 1903–21, which, in regard to principle and practice, has the same general foundation as the Imperial Statutes, modified to suit Australian conditions. The Act is administered by a Commissioner of Patents. Comparatively small fees, totalling £8, are now sufficient to obtain for an inventor protection throughout Australia, Papua and the Territory of New Guinea, and the only renewal fee (£5) is payable before the expiration of the seventh year of the patent, or within such extended time, not exceeding one year, and upon payment of further fees, as may be allowed.

(ii) *Summary.* The number of separate inventions in respect of which applications were filed during the years 1921 to 1925 is given in the following table, which also shows the number of letters patent sealed in respect of applications made in each year.

PATENTS, AUSTRALIA.—SUMMARY, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
No. of applications	5,072	5,431	5,306	5,432	5,306
No. of applications accompanied by provisional specifications	3,378	3,643	3,454	3,637	3,405
Letters patent sealed during each year	2,573	3,273	2,464	2,313	2,479

(iii) *Revenue.* The revenue of the Commonwealth Patents Office during the years 1921 to 1925 is shown hereunder :—

PATENTS, AUSTRALIA.—REVENUE, 1921 TO 1925.

Particulars.	1921.	1922.	1923.	1924.	1925.
	£	£	£	£	£
Fees collected under—					
States Patents Acts ..	5	4	3	..	..
Patents Acts 1903–21 ..	28,516	30,912	27,995	26,259	29,017
Receipts from publications	385	561	599	1,004	926
Total	28,906	31,477	28,597	27,263	29,943

2. Trade Marks and Designs.—(i) *Trade Marks.* Under the Trade Marks Act 1905, the Commissioner of Patents is also Registrar of Trade Marks. This Act has been amended from time to time, the last amendment having been made in 1922. Special provisions for the registration of a " Commonwealth Trade Mark " are contained in the

Act of 1905, and are applicable to all goods included in or specified by a resolution passed by both Houses of Parliament that the conditions as to remuneration of labour in connexion with the manufacture of such goods are fair and reasonable.

(ii) *Designs.* The Designs Act 1906, as amended by the Patents, Designs and Trade Marks Act 1910, and the Designs Act 1912, is now cited as the Designs Act 1906–12. Under this Act a Commonwealth Designs Office has been establshed, and the Commissioner of Patents appointed " Registrar of Designs."

(iii) *Summary.* The following table shows the applications for trade marks and designs received and registered during the years 1921 to 1925 :—

TRADE MARKS AND DESIGNS, AUSTRALIA.—SUMMARY, 1921 TO 1925.

Applications.	1921.	1922.	1923.	1924.	1925.
RECEIVED.					
Trade Marks	2,410	2,763	2,773	2,829	2,770
Designs	357	427	488	498	554
REGISTERED.					
Trade Marks	2,542	1,991	2,038	1,801	2,029
Designs	300	380	377	453	439

(iv) *Revenue.* The revenue of the Trade Marks and Designs Office during the years 1921 to 1925 is given hereunder :—

TRADE MARKS AND DESIGNS, AUSTRALIA.—REVENUE, 1921 TO 1925.

Particulars.	1921.			1922.			1923.			1924.			1925.		
	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Fees collected under State Acts ..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Fees collected under Commonwealth Acts	10,557	427	122	9,282	499	131	9,26	539	102	8,710	561	238	9,310	629	186
Total ..	10,558	427	122	9,283	499	131	9,26	539	102	8,710	561	238	9,310	629	186

§ 2. Copyright.

1. **Legislation.**—Copyright is regulated by the Commonwealth Copyright Act of 1912, details of which will be found in previous issues of the Official Year Book (see No. 8, p. 1066), while, subject to modifications relating to procedure and remedies, the British Copyright Act of 1911 has been adopted as law and declared to be in force within Australia.

Reciprocal protection was extended in 1918 to citizens of Australia and of the United States under which copyright may be preserved in the latter country by registration at the Library of Congress, Washington. The Commonwealth Government promulgated a further Order in Council which came into operation on the 1st February, 1923, and extended the provisions of the Copyright Act to the foreign countries of the Copyright Union, subject to the observance of the conditions therein contained.

2. **Applications and Registrations.**—The following table shows under the various headings the number of applications for copyright received and registered, and the total revenue received for the years 1921 to 1925 :—

COPYRIGHT, AUSTRALIA.—SUMMARY, 1921 TO 1925.

Particulars.		1921.	1922.	1923.	1924.	1925.
Applications received—						
Literary	No.	953	1,027	1,133	1,145	1,269
Artistic	No.	146	185	186	150	134
International	No.	5	14	3	2	15
Applications registered—						
Literary	No.	809	942	1,105	1,059	1,257
Artistic	No.	138	160	190	138	117
International	No.	4	..	13	2	4
Revenue	£	292	312	339	336	360

§ 3. Local Option, and Reduction of Licences.

1. **General.**—Local option concerning the sale of fermented and spirituous liquors is in force in all the States, the States being divided into areas generally conterminous with electoral districts, and a poll of the electors taken from time to time in each district regarding the continuance of the existing number of licensed premises, the reduction in number, or the closing of all such premises. Provision is made for giving effect to the results of the poll in each district in which the vote is in favour of a change.

2. **New South Wales.**—(i) *Local Option.* The Liquor Act of 1912 made provision for taking a vote of the electors on the parliamentary rolls on the question of continuance of existing licences, the reduction of the same, or that no licence be granted of public houses, wine-shops, and clubs. This vote was to take place simultaneously with that for a general election. Three such polls were taken, but in 1919, by an Amending Act, further taking of polls was suspended pending a referendum on the question of prohibition, to be taken within eighteen months after the passing of this Act. This referendum was not held, and a later amendment of the Act in 1923 fixed the first Saturday in September, 1928, as the day on which the vote is to be taken.

(ii) *Licences Reduction Board.* The Liquor (Amendment) Act of 1923 provided for the reconstitution, as from 1st July, 1924, of the Licences Reduction Board and of the Licensing Courts which control the issue of licences. Three Licensing Magistrates constitute the Licensing Court in each licensing district, as well as the Licences Reduction Board, so that one tribunal controls all matters relating to the issue and withdrawal of licences. The funds for compensation in respect of publicans' licences are obtained by a levy at the rate of 3 per cent. on the value of all liquor purchased during the preceding year, of which the licensees pay one-third and the owners two-thirds. Since the beginning of 1923 the Board has also been empowered to reduce the number of Australian wine licences, the holders of which are liable to pay fees into the compensation fund at the rate of 1 per cent. of their purchases.

The Board, which was established by the Liquor (Amendment) Act of 1919, commenced operations in 1920, and up to 31st December, 1925, had terminated 260 publicans' licences and 58 wine licences, and had accepted the surrender of 61 publicans' licences and 2 wine licences. The compensation awarded was £507,215 in respect of 318 publicans' licences and £51,320 for 60 wine licences, while compensation had not been claimed in respect of one publican's licence in Sydney. The reductions made by the Board in the Sydney electoral district were 70 hotel licences and 31 wine licences, and the compensation awarded amounted to £152,500 and £28,075 respectively. In the Newcastle electoral district the reductions were 23 hotel licences, and the compensation awarded £29,470. The other reductions were in country districts. The fees payable into the compensation fund amounted to £1,248,003. During the years 1920 to 1925, 60 hotel licences were terminated by other than the Board's action, and 14 new licences were granted, and during the years 1923 to 1925, 6 wine licences were terminated and 1 new licence granted.

3. Victoria.—(i) *Local Option.* Under the Licensing Act of 1922, the previous system of local option was abolished, and provision was made for a vote of the electors for the Legislative Assembly to be taken once in every eighth year, the first of such votes to be taken in the year 1930. The Act also prescribes that each licensing district shall consist of an electoral district, instead of the subdivisions which under the previous Acts formed licensing districts.

(ii) *Licences Reduction Board.* This Board was established in 1906 with power to reduce the number of licensed victuallers' premises in districts in which there were more than the statutory number of licences. It has also the duty of fixing and awarding compensation to the owners and licensees of closed hotels. The compensation fund is derived from vendors of liquor who must all pay in proportion to the benefit they derive from their licences. The amount charged to the wholesale trade is 4 per cent. of the cost of all liquors sold to non-licensed persons, no charge being made on sales to other licensed vendors. The retail trade is charged 6 per cent. on liquor purchases, except the holders of Australian wine licences, who are charged 4 per cent. The expenses of operating the Licensing Act are a charge on the Compensation Fund, and, in addition, £23,000 is paid annually to the Police Superannuation Fund, and £68,000 to the municipalities which formerly granted licences. The balance is available for compensation purposes, but any surplus at the end of the financial year over an increment in the funds of £20,000 annually is carried to Consolidated Revenue.

Under the 1922 Act, the Court has held deprivation sittings each year in different licensing districts, and has taken away 103 victuallers', 26 Australian wine, 3 spirit merchants', and 2 grocers' licences. When the Board came into existence in 1906, the number of hotels licensed was 3,521, of which 73 were roadside victuallers', and up to the 31st December, 1925, the number closed was 1,588. Of these, 1,183 represented hotels delicensed, and 405 hotels surrendered, the compensation paid to owners and licensees amounting to £808,121 and £163,585 respectively.

(iii) *Mallee and Additional Licences.* Under the 1916 Act, special provisions were made for the granting of victuallers' licences in the Mallee, and by the 1922 Act these provisions as amended by that Act are extended to any area outside the Mallee country proclaimed for the purpose. Licences have been granted in 9 such areas.

4. Queensland.—Local Option is regulated in Queensland by the Liquor Act of 1912, as amended by the Liquor Act Amendment Acts of 1920 and 1923. A vote on the question is to be taken on the request of one-tenth of the number of electors in an area, which is defined in the request, and such area may be (*a*) an electoral district, or (*b*) an electoral division of an electoral district, or (*c*) a group of two or more divisions of an electoral district, provided that the whole of such local option area is wholly comprised within one and the same electoral district. A separate request is necessary for each resolution on which a vote is to be taken.

By the amending Act of 1920 every local option vote must be taken in the month of May in every third year on a day to be fixed by the Governor in Council. On the 16th May, 1925, 43 polls were taken as requested in local option areas defined by the petitioners on the questions of prohibition in 25 areas, and new licences in 18 areas. Increase of licence was carried in 16 areas, while in 2 areas the majority for prohibition did not reach the necessary three-fifths of the total votes polled.

5. **South Australia.**—In this State the subject of local option is regulated by Part VIII. of the Licensing Act 1917. Under this Act each electoral district for the House of Assembly is constituted a local option district, and each electoral district may, by proclamation of the Governor, be divided into local option districts. A quorum of 500 electors, or of one-tenth of the total number of electors—whichever is the smaller number—in any district may petition the Governor for a local option poll. The persons entitled to vote are those whose names appear on the electoral roll and who reside in the local option district. A local option poll is taken on the same date as a general election.

In order to settle any doubt as to the validity of the proclamation of 1917 relating to local option districts, an Act was passed in 1922 by which such proclamation was declared to be valid, and the local option resolutions in force in old districts at the time of the proclamation were declared to be still in force notwithstanding any alterations in the boundaries of the districts

6. **Western Australia.**—(i) *General.* By an Amending Act, No. 39 of 1922, the Local Option provisions of the Licensing Act 1911 were repealed, and in lieu thereof a Licences Reduction Board was constituted, and charged with the duty of reducing the number of licences throughout the State over a period of 6 years from 1st January, 1923, to the extent of the money for the time being to the credit of a fund to enable compensation to be paid to the lessors and licensees of premises deprived of a licence. The fund is formed by a levy of 2 per cent. per annum on the amount of liquor purchased for licensed premises, excluding duties thereon. More extended reference to this subject was made in Official Year Book No. 18, page 1030.

(ii) *Prohibition.* In addition to the above provisions, the Act of 1922 provides that in the year 1925 and in every fifth year thereafter on a day to be fixed by proclamation, a poll shall be taken in each electoral district as to whether prohibition shall come into force. It also provides that where prohibition has been carried and is in force, the proposal shall be that the licences for sale of intoxicating liquor be restored. Where a resolution of prohibition is carried, no compensation is payable. A poll was taken on the 4th April, 1925, with the following result:—In favour of prohibition, 41,362; against, 77,113; informal, 658; total, 119,133. The percentage of persons voting on the number enrolled (200,212) was 59.5.

7. **Tasmania.**—In this State the subject of Local Option is dealt with in Part V. (Sections 39 to 53) of "The Licensing Act 1908" as amended by the "Licensing Act 1917." The provisions of Part V. of the Act of 1908 did not come into force until 1st January, 1917. It was thereby provided that a poll of ratepayers was to be taken in each city and in each municipality in which more than one licensed house was situate, once in every third year. The most recent polls taken were in December, 1923, in Hobart and Launceston, and in April, 1924, in other municipalities. In neither of the cities (Hobart and Launceston) were the prescribed resolutions carried, the statutory proportion of the electors not having voted at either poll. In one municipality the resolution for continuance was carried. In each of the remaining 39 municipalities in which polls were taken, the statutory proportion of electors failed to vote, and accordingly no resolution was carried. No poll was taken in 1925.

§ 4. Lord Howe Island.

1. **Area, Location, etc.**—Between Norfolk Island and the Australian coast is Lord Howe Island, in latitude 31° 30′ south, longitude 159° 5′ east. It was discovered in 1788. The total area is 3,220 acres, the island being 7 miles in length and from ½ to 1¾ miles in width. It is distant 436 miles from Sydney, and in communication therewith by monthly steam service. The flora is varied and the vegetation luxuriant, with shady forests, principally of palms and banyans. The highest point is Mount Gower, 2,840 feet. The climate is mild and the rainfall abundant, but on account of the rocky formation only about a tenth of the surface is suitable for cultivation.

2. **Settlement.**—The first settlement was by a small Maori party in 1853; afterwards a colony was settled from Sydney. Constitutionally, it is a dependency of New South Wales, and it is included in the electorate of Sydney. A Board of Control manages the affairs of the island and supervises the palm seed industry referred to hereunder.

3. **Population.**—The population at the Census of 3rd April, 1921, was 65 males, 46 females—total 111.

4. **Production, Trade, etc.**—The principal product is the seed of the native or Kentia palm. The lands belong to the Crown. The occupants pay no rent, and are tenants on sufferance.

§ 5. Commonwealth Council for Scientific and Industrial Research.

1. **General.**—By the Science and Industry Research Act, 1926, the previously existing Commonwealth Institute of Science and Industry was reorganized under the title of the Council for Scientific and Industrial Research. An account of the organization and work of the former Institute was given in previous issues of the Official Year Book. (*See* No. 18, p. 1062.)

2. **Science and Industry Research Act, 1926.**—This Act provides for a Council consisting of—

(*a*) Three members nominated by the Commonwealth Government.
(*b*) The Chairman of each State Committee constituted under the Act.
(*c*) Such other members as the Council, with the consent of the Minister, co-opts by reason of their scientific knowledge.

The three Commonwealth nominees form an Executive Committee which may exercise, between meetings of the Council, all the powers and functions of the Council, of which the principal are as follow:—(*a*) The initiation and carrying out of scientific researches in connexion with primary or secondary industries in the Commonwealth; (*b*) the training of research workers and the establishing of industrial research studentships and fellowships; (*c*) the making of grants in aid of pure scientific research; (*d*) the establishment of industrial research associations in any industries; (*e*) the testing and standardization of scientific apparatus and instruments; (*f*) the establishment of a Bureau of information; (*g*) the function of acting as a means of liaison between the Commonwealth and other countries in matters of scientific research.

The State Committees are to be constituted in accordance with the regulations prescribed, and their main function is to advise the Council as to investigations to be undertaken. A sum of £250,000 has been appropriated under the terms of the Act for the purpose of scientific and industrial investigations.

3. **Science and Industry Endowment Act, 1926.**—Under this Act the Government has established a fund of £100,000, the income from which is to be used to provide assistance (*a*) to persons engaged in scientific research, and (*b*) in the training of students in scientific research. Provision is made for gifts or bequests to be made to the fund, which is controlled by a trust consisting of the three Commonwealth nominees on the Council. In accordance with the Act arrangements have been made to send a number of qualified graduates abroad for training in special fields of work.

4. **Work of the Council.**—The Council held its first meeting in June, 1926, and has decided to concentrate its initial activities on five main branches of work, viz., (i) Animal pests and diseases; (ii) Plant pests and diseases; (iii) Fuel research—especially liquid fuels; (iv) Forest products; and (v) Preservation of foodstuffs—especially cold storage problems. While continuing the major researches initiated by the former Advisory Council and the Institute of Science and Industry, the Council is engaged on the organization of investigations into the five groups of problems specified above. Some of the more important matters on which investigations have already been carried out, or are in progress are—(*a*) sheep blow-fly pest, (*b*) prickly-pear pest, (*c*) pottery, (*d*) paper-pulp from Australian trees, etc., (*e*) tanning materials, (*f*) cattle-tick dips, (*g*) viticultural matters, (*h*) citrus fruit problems, (*i*) buffalo-fly pest, (*j*) bunchy-top disease in bananas, (*k*) engineering standardization, (*l*) power-alcohol, (*m*) worm-nodule disease in cattle, (*n*) freezing of beef, (*o*) posidonia fibre, and (*p*) tuberculosis in stock.

In carrying out its work it is the policy of the Council to co-operate closely not only with existing scientific institutions and State Government Departments in Australia, but also with similar organizations in other parts of the Empire.

§ 6. The Commonwealth Solar Observatory.

1. **Reasons for Foundation.**—The Commonwealth Solar Observatory was established for the study of solar phenomena, for allied stellar and spectroscopic research, and for the investigation of associated terrestrial phenomena and, incidentally, will fill a gap in the chain of existing astrophysical observatories. With its completion, there will be stations separated by 90 degrees of longitude round the globe, while its situation in lat. 35° south places it in the unique position of being the only observatory making a feature of solar work south of the equator. In addition to advancing the knowledge of the Universe and the mode of its development, it is hoped that the eventual discovery of the true relation between solar and terrestrial phenomena may lead to results which will prove of direct value to the country.

2. **History of Inauguration.**—The initial step towards the establishment of a Solar Observatory in Australia was taken on 4th March, 1907, when, as the result of a letter communicated to the press of South Australia, inquiry was made into the possibility of the Adelaide Observatory undertaking this work. Subsequently the movement received the support of the International Solar Union, the Royal Society, the British Association for the Advancement of Science, the Australasian Association for the Advancement of Science, the Smithsonian Institution, and various other scientific bodies throughout the world, and in April, 1908, a memorandum was presented to the Prime Minister setting forth the reasons why a solar station in Australia is desirable. As the result of inquiries among the State Observatories, it was found that none of them had the necessary funds or equipment for undertaking the work. Committees for aiding in the establishment of a Solar Observatory in Australia were instituted by the British Association and by the Australasian Association for the Advancement of Science.

The Committee of the last-mentioned body sent a deputation to the Minister for Home Affairs in April, 1909, and a public meeting was organized in the Melbourne Town Hall, presided over by the Governor-General, and supported by the Governor of Victoria and delegates from all the Australian Universities and Observatories. As a result of the public support which the movement had received, in December, 1909, the Prime Minister took the first official action towards the establishment of the Observatory by accepting the gift of a 9-inch refracting telescope from Mr. James Oddie, of Ballarat, and by placing on the Estimates a sum of money sufficient for the erection of a temporary building within the Federal Capital area wherein to house the telescope in order that the suitability of this site might be examined. On 19th March, 1910, a conference of surveyors at Canberra, attended also by the Government Astronomer of Victoria, and by the Commonwealth Meteorologist, recommended that Mount Stromlo should be the site of the temporary observatory.

On 8th September, 1911, the temporary observatory on Mount Stromlo being ready, Mr. Baracchi, then Government Astronomer of Victoria, was commissioned to undertake observations to test the site, and two years later he reported that it was suitable for an observatory for solar and general astronomical research. In the meantime a sum of money, which had been collected for its partial equipment, was offered to the Commonwealth Government on behalf of the subscribers, but the offer was not at the time accepted.

In May, 1913, a further memorandum by the present Director, setting forth certain aspects of Australia's participation in the International scheme of solar research, was transmitted to the Government, and, in reply, the Secretary to the Department of External Affairs stated that when Canberra became the seat of Government, provision would be made for the establishment amongst general scientific studies of a section to be devoted to solar physics. In 1914, the visit of the British Association to Australia was made the occasion of a deputation of overseas Astronomers to the Prime Minister, which resulted in a conference with the Works and Railways Department to discuss the probable cost of housing on Mount Stromlo the apparatus which had been offered. The Government ultimately agreed to accept the donations and to arrange that observations should be conducted when times were more favourable. The matter remained in abeyance during the war and until April, 1923, when the Government decided to proceed with the establishment of the observatory. As a first step, a committee of British Astronomers was invited to act as a selection committee to choose a Director. The first Director, Dr. W. G. Duffield, was appointed as from 1st January, 1924.

3. **Site of the Observatory.**—The site selected for the Observatory is on Mount Stromlo, a ridge of hills about seven miles west of Canberra. The highest point is 2,650 feet above sea level, or about 700 feet above the general level of the Federal Capital City. A road has been constructed to the summit, upon which has been erected the temporary building to house the Oddie telescope. From the summit clear views are obtained in all directions. The approach to the Observatory passes the reservoir which supplies Canberra with water, and thence follows the eastern side of the ridge past several sheltered sites suitable for residences for the members of the staff, who will thus be within easy reach of the instruments to be housed on its crest.

4. **Buildings.**—The temporary structure for housing the Oddie telescope, which was the first building erected upon Mount Stromlo, is a concrete building, comprising a central dome 16 feet in diameter, with four rooms opening off it. A small reservoir has been built near the summit which is fed with water pumped from the main reservoir 120 feet below. The present building programme includes residential quarters for the staff, and an administrative block which is being erected near the site for the laboratory and workshop. It is hoped that a contract for further buildings will be let shortly. Electric light and power have already been conveyed to the residential area and to the summit. The station is connected by telephone with the Canberra Post Office. Pending the completion of the buildings on Mount Stromlo, the bulk of the work has been carried out in temporary premises at the Hotel Canberra.

5. **Equipment.**—The bulk of the present equipment is due to the generosity of supporters of the movement in England and Australia. The gifts include a 6-inch Grubb refracting telescope, presented by the late W. E. Wilson, F.R.S., and Sir Howard Grubb, F.R.S., trustees of the late Lord Farnham, a 9-inch Grubb refractor with a 6-inch Dallmeyer lens, both presented by the late Mr. James Oddie, of Ballarat, while Mr. J. H. Reynolds, of Birmingham, has presented a large reflecting telescope with a mirror 30 inches in diameter, which will shortly reach Australia. Cash donations amounting to over £2,000 have been received, and will form the nucleus of a Foundation and Endowment Fund. With these generous gifts as testimony to the value of Australia's co-operation in solar and astrophysical research, it is hoped that the Government will liberally equip and endow the institution so that it may rank with the great observatories of the world.

During the past year a microphotometer, a Goerz spectrograph, a Rivett precision lathe and minor additions have been made to the equipment, and the library has benefited by gifts of early publications from other observatories.

6. **Observational Work.**—Since Mr. Baracchi and Dr. Baldwin completed their examination of the site in 1913, the Oddie telescope was not used for astronomical purposes until the present year, though the building has served as a lookout-station for bush fires during the summer months. During the year, a dense flint glass prism was mounted in front of the object glass, enabling the spectra of stars to be photographed upon a considerable scale. Routine work upon stellar spectra was commenced in February, 1926, with the object of measuring the absolute brightness and distances of the stars. To determine the intensity of the auroral component, observations were made on the luminosity of the night sky, and for some months the brightness of Nova Pictoris was observed. Measures were recorded of the solar radiation reaching the earth throughout the 24 hours, and observations were made of the potential gradient of the earth's electric field. A laboratory research upon certain spectroscopic phenomena is in progress.

7. **Staff.**—The present staff, which is, of course, merely a nucleus, consists of the Director, two Assistants, a Research Fellow, and two mechanics.

§ 7. Department of Chemistry, South Australia.

In South Australia, a Department of Chemistry was formed in 1915. The Department is principally engaged in general routine chemical examinations and analyses in pursuance of various Acts of Parliament and for Government Departments, but the chemical investigation of local products and industries forms an important branch of its work. At first the Department issued bulletins, of which nine have been published, but since 1918 the results of investigations made have been embodied in the reports of the Advisory Council of Science and Industry of South Australia. Researches have been carried out for the Wheat Weevil Committee, and investigations have been made into the lignites at Moorlands, the utilization of grapes and surplus lemons, cold-water paints, calorific values of South Australian firewoods, charcoal and coke, kernel oil from peaches and apricots, and a survey of the tannin resources of South Australia. Further investigations into South Australian lignite are reported in the South Australian Mining Review.

§ 8. State Advisory Council of Science and Industry of South Australia.

The Advisory Council of Science and Industry of South Australia is the result of the fusion of the members of the Committee of Scientific Research and the Committee on Post-war Problems. The members of the Council, who all act in an honorary capacity, are the nominees of the different public bodies in the State, such as the Chamber of Commerce, the Chamber of Manufactures, Associated Banks, United Trades and Labour Council, Employer's Federation, etc., and include a number of Government technical officials and University professors.

For the purposes of investigation, the Council is divided into Committees, under the headings Agriculture, Pastoral, Mineral, Manufacture, Trade, Commerce, and Transport. These Committees consider and take evidence on subjects proper to their provinces, and report to the Government.

The office of the Council is attached to the Department of Chemistry, where research work is carried out at the instance of the Council, the Director of Chemistry being Vice-Chairman of the Council. Four reports have been issued for the years 1919 to 1924, and contain a summary of the work done, with reports of investigations, including the "Wheat Pests Problem," "Utilization of Surplus Lemons," "Cold Water Paint," "Calorific Values of Different Firewoods," "Peach and Apricot Kernel Oil," and "Tannin Resources of South Australia," etc. The Council also distributed information forwarded by the Commonwealth Department of Markets and Migration.

§ 9. Valuation of Australian Production.

1. **Value of Production.**—The want of uniformity in methods of compilation and presentation of Australian statistics renders it an extremely difficult task to make anything like a satisfactory valuation of the various elements of production. At present there is so little accurate statistical knowledge regarding such industries as forestry, fisheries, poultry, and bee-farming, that any valuation of the production therefrom can only be regarded as the roughest approximation. As a matter of fact, complete information as to value of production in all states is available in regard to the mining industry alone, and even in this case adjustments have to be made before the returns are strictly comparable. Careful estimates have been made in connexion with the value of production from the agricultural and pastoral industries, which, it is believed, in the main give fairly accurate results. The returns given in the following table for 1914 and subsequent years may be taken as substantially correct. The table hereunder shows the approximate value of the production from all industries during the years specified :—

ESTIMATED VALUE OF PRODUCTION.—AUSTRALIA, 1914 TO 1924-25.

Year.	Agriculture.	Pastoral.	Dairy, Poultry, and Bee-farming.	Forestry and Fisheries.	Mining.	Manufacturing.(a)	Total.
	£1,000	£1,000	£1,000	£1,000	£1,000	£1,000	£1,000
1914 ..	36,052	63,452	22,504	6,853	22,054	59,004	209,919
1915 ..	75,475	65,852	22,399	6,253	22,060	59,212	251,251
1916 ..	61,255	77,126	27,931	6,062	23,192	60,502	256,068
1917 ..	59,641	83,926	31,326	6,147	24,998	65,327	271,365
1918 ..	59,036	88,448	33,738	6,890	25,462	70,087	283,661
1919–20 ..	72,202	101,578	38,830	9,670	18,982	92,330	333,592
1920–21 ..	112,801	85,861	52,613	11,136	21,613	101,778	385,802
1921–22 ..	81,890	70,048	44,417	10,519	19,977	112,517	339,368
1922–23 ..	84,183	90,535	43,542	11,124	20,316	123,188	372,888
1923–24 ..	81,166	102,843	42,112	11,866	22,232	132,732	392,951
1924–25 ..	107,096	121,891	45,190	12,357	24,646	137,977	449,157

(a) These amounts differ from those given in Chapter XXII., Manufacturing Industry, which include certain products included under Dairy Farming and Forestry in this table.

2. **Relative Productive Activity.**—The relative output or production per head of population measured quantitatively cannot be gauged from a mere statement of the total value of production from year to year. If measured by mere value, increase of price might have the effect of making an equal production to that of a time when prices were lower, and show an increase which would, of course, be misleading. For example, the annual figures relating to the estimated value of production from Australian industries do not directly show whether there has been any increase in the *quantity* produced, since the price-level at the time is itself a factor in the determination of the values. Before,

therefore, any estimate of the relative increase or decrease in production (that is, in the relative quantity of output) can be formed, the variations due to the price element must be eliminated. This is done in the following table, in which Column I. shows the estimated *value* of production (i) in the aggregate and (ii) per head of mean population. In Column II. the estimated value of production per head of population is shown in the form of index-numbers with the year 1911 as base; that is to say, the production per head in 1911 is made equal to 1,000, and the values for the other years computed accordingly. In Column III. production price index-numbers are given; it is assumed that these index-numbers reflect, with substantial accuracy, variations in production prices in Australia as a whole. The figures in Column IV. are obtained by dividing the figures for each year in Column II. by the corresponding figures in Column III. They show the estimated relative productive activity per head of population, taking the year 1911 as the basic or standard year, the fluctuations due to variations in prices having been eliminated :—

RELATIVE PRODUCTIVE ACTIVITY.—AUSTRALIA, 1871 TO 1924-25.

Year.	I. Estimated Value of Production. (i) Total (000 omitted)	I. Estimated Value of Production. (ii) Per Head of Population.	II. Relative Value of Production per Head (Year 1911 = 1,000).	III. Production Price Index-Numbers (Year 1911 = 1,000). (*a*)	IV. Estimated Relative Productive Activity Index-Numbers (Year 1911 = 1,000). (*a*)
	£	£			
1871	46,700	27.46	664	1,229	540
1881	71,116	30.83	746	1,121	665
1891	96,087	29.65	717	945	759
1896	92,605	26.06	630	922	683
1901	114,585	29.96	725	974	744
1906	147,043	35.94	869	948	917
1911	189,098	41.34	1,000	1,000	1,000
1916	256,068	52.07	1,260	1,398	901
1920–21	385,802	71.30	1,725	1,911	903
1921–22	339,368	61.60	1,490	1,579	944
1922–23	372,888	66.19	1,601	1,753	913
1923–24	392,951	68.34	1,653	1,850	894
1924–25	449,157	76.47	1,850	1,880	984

(*a*) Production Price Index-numbers are not available prior to 1908, and Wholesale Price Index numbers are substituted therefor.

The total production from all recorded industries during 1924–25 was £449,157,000, equal to an average of £76.47 per inhabitant.

The index of productive activity given above is based on total population and is that most usually employed for such a purpose. As a measure of the efficiency of the whole community to provide with its existing organization the commodities produced in the industries concerned the index is correct, but it does not necessarily indicate the variation in efficiency of the workers engaged in those industries, since these workers may not represent a constant proportion of the total population. As a fact this proportion is diminishing, and if the index were based on persons engaged in the industries rather than on total population it would be increased by nearly 10 per cent. in the later years of the period, and the index for 1924 instead of falling short of the 1911 standard by 1.6 per cent. would be in excess of it by 7.7 per cent. This aspect of the question is at present the subject of further investigation.

In Year Book No. 5 (page 1217) will be found the value of production in each State at decennial intervals since 1871, and for the year 1909. Details for individual States are not available for subsequent years owing to discontinuance by the Customs Department of the collection of statistics of interstate trade.

§ 10. Wealth of Australia.

1. Methods of Estimating.—(i) *General.* At various times estimates have been made of the wealth of Australia, and more especially of the private wealth. For this purpose three different methods have been employed—(*a*) The Probate method, (*b*) The Census method, (*c*) The Inventory method.

(ii) *The Probate Method.* This method consists essentially in taking account over a given period of the amount of property left by deceased persons as disclosed by probate returns, and in assuming that, in respect of wealth, those dying at each age represent a fair sample of the persons living at that age. It also involves the further assumption that the whole of a deceased person's wealth passes under review in the probate returns. If the period involved is a fairly long one, and the community is large, the first of these assumptions is probably warranted ; but, owing to the large number of cases in which property passes by settlement or by gift *inter vivos*, the second assumption is rarely allowable, and the probate method of estimate is consequently unsatisfactory. It has a further disadvantage in that it requires a record over a long period of the ages of the deceased persons combined with the values of the estates subject to probate, and thus involves an elaborate inquiry to furnish a result which when obtained relates to a somewhat remote and rather indefinite past. In these circumstances it may be regarded under Australian conditions as an unreliable method.

(iii) *The Census Method.* From many points of view the census method would appear to be that which should give the most reliable results. The figures are obtained directly from the persons who should be best able to give the information—the owners of the property concerned. The results relate to a comparatively recent and specific date, thereby avoiding one of the disadvantages of the probate method. Further, the form in which the information is obtained enables a classification to be made, showing the number of persons in each wealth group. Notwithstanding these manifest advantages, the census method is not convenient to employ for the purposes of an estimate of wealth, since in normal times its inquisitorial character is objected to, and its cost is very great.

(iv) *The Inventory Method.* The inventory method has been employed for many years in the United States of America, and has been the basis of several estimates of Australian wealth. This method consists in making use of various valuations of different forms of material wealth that have been made for other purposes, and of supplementing these by estimates based on statistical data available in respect of items for which no such valuations are already in existence. The estimate when obtained relates to a specific and fairly recent point of time, and is in such form as to enable a classification to be made according to nature and locality of the items concerned.

2. Inventory Estimates, Private Wealth, 1813 to 1921.—(i) *Australia.*—Inventory estimates for Australia are furnished for a number of years in the following table, together with the average wealth per head of population in each case. These figures relate to private wealth, and do not include any estimate in respect of Government or Municipal property :—

PRIVATE WEALTH, AUSTRALIA.—INVENTORY ESTIMATES, 1813 TO 1921.

Year to which Estimate Relates.	Authority.	Aggregate Amount.	Mean Population.	Average Private Wealth per Head of Mean Population.
		Million £.	Thousands.	£
1813	T. A. Coghlan	1	13	75
1838	,, ...	26	143	182
1863 (*a*)	,, ...	160	1,233	130
1888 (*a*)	,, ...	885	2,932	302
1890	,, ...	1,019	3,107	328
1899	,, ...	879	3,690	238
1901	,, ...	909	3,791	240
1903	,, ...	982	3,893	252
1915	G. H. Knibbs	1,620	4,985	325
1921	C. H. Wickens	2,166	5,458	397

(*a*) Adjusted to allow for exclusion of New Zealand.

(ii) *Details for States, 1921.* The following table furnishes details as at 30th June, 1921, in respect of each State and Territory and for Australia as a whole :—

PRIVATE WEALTH.—INVENTORY ESTIMATE, DETAILS, 1921.

Class of Property.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Ter.	Australia.
	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
I. Land and Improvements	593,484	399,503	142,120	115,814	67,777	41,549	625	397	1,361,269
II. Live Stock	48,947	27,817	48,664	10,790	15,336	4,422	2,696	161	158,833
III. Agricultural, Dairying and Pastoral Implements and Machinery	12,409	10,218	4,057	5,248	3,300	709	12	11	35,964
IV. Manufacturing Plant and Machinery ..	29,735	17,588	9,999	4,233	3,325	2,838	..	..	67,718
V. Mining Properties (including Plant and Machinery) ..	14,800	5,300	2,800	1,300	7,200	2,600	..	..	34,000
VI. Coin and Bullion ...	13,607	38,874	3,173	2,452	2,163	945	1	1	61,216
VII. Private Railways and Tramways ..	3,511	777	4,906	278	5,047	1,454	..	..	15,973
VIII. Shipping	2,970	2,793	370	756	164	186	4	..	7,243
IX. Agricultural and Pastoral Products ..	24,692	17,993	11,711	8,275	5,624	2,210	3	7	70,515
X. Locally Manufactured Products ..	44,479	34,481	12,755	7,132	3,645	2,343	..	..	104,835
XI. Mining Products (other than gold) ..	1,964	111	214	148	88	132	3	..	2,660
XII. Imported Merchandise	31,616	23,062	11,448	7,461	5,008	3,200	59	37	81,891
XIII. Clothing and Personal Adornments ..	10,536	7,685	3,815	2,486	1,669	1,066	20	12	27,289
XIV. Furniture and Fittings, Books, Pictures, etc. ..	43,482	33,229	12,183	10,845	5,529	3,428	46	38	108,780
XV. Motor Vehicles ..	9,862	7,537	3,235	4,688	1,417	931	5	..	27,675
	886,094	626,968	271,450	181,906	127,292	68,013	3,474	664	2,165,861
Mean Population for 1921 (in thousands)	2,107.1	1,537.0	763.0	497.2	333.8	213.3	3.9	2.5	5,457.8
Private Wealth per Head ...	£421	£408	£356	£366	£381	£319	£889	£267	£397

(iii) *Details for Australia 1903, 1915, and 1921.* A comparison of the leading items for 1903, 1915, and 1921, and of the relative distribution of such items, is given in the following table :—

PRIVATE WEALTH.—INVENTORY ESTIMATE, AUSTRALIA, 1903, 1915, AND 1921.

Classification.	Aggregate Amount.			Relative Distribution.		
	1903 (Coghlan).	1915 (Knibbs).	1921 (Wickens).	1903 (Coghlan).	1915 (Knibbs).	1921 (Wickens).
	Million £.	Million £.	Million £.	%	%	%
Land and Improvements ..	683.9	1,105.6	1,361.3	69.6	68.3	62.9
Live Stock	96.9	100.4	158.8	9.9	6.2	7.3
Coin and Bullion	26.1	44.4	61.2	2.6	2.7	2.8
Merchandise and Produce on hand	59.6	148.0	259.9	6.1	9.1	12.0
Household Furniture and Personal Property	43.4	91.9	163.8	4.4	5.7	7.6
Shipping	6.4	13.3	7.2	0.7	0.8	0.3
Mines and Mining Plant ..	32.2	41.3	34.0	3.3	2.6	1.6
Plant, Machinery, etc., not elsewhere included	33.5	74.6	119.7	3.4	4.6	5.5
Total	982.0	1,619.5	2,165.9	100.0	100.0	100.0

(iv) *Private Wealth per Head.* A comparison of the wealth per head under the principal items mentioned above is furnished in the following table :—

INVENTORY ESTIMATE.—PRIVATE WEALTH PER HEAD, AUSTRALIA, 1903, 1915, AND 1921.

Classification.	Average Wealth per Head.		
	1903 (Coghlan).	1915 (Knibbs).	1921 (Wickens).
	£ s. d.	£ s. d.	£ s. d.
Land and Improvements	175 13 5	221 15 10	249 8 6
Live Stock	24 17 10	20 2 9	29 1 11
Coin and Bullion	6 13 11	8 18 1	11 4 3
Merchandise and Produce on hand	15 6 4	29 13 7	47 12 5
Household Furniture and Personal Property ..	11 2 9	18 8 10	30 0 3
Shipping	1 12 8	2 13 6	1 6 4
Mines and Mining Plant	8 5 5	8 5 9	6 4 7
Plant, Machinery, etc., not elsewhere included ..	8 12 1	14 19 2	21 18 8
Total	252 4 5	324 17 6	396 16 11

(v) *Distribution according to States and Territories.* The following table gives the distribution of the private wealth of Australia, according to the States and Territories in which it was situated. In the case of the 1903 estimates, the Northern Territory was regarded as part of South Australia, and the Federal Capital Territory not having come into being as a separate entity, was included in New South Wales :—

PRIVATE WEALTH.—INVENTORY ESTIMATE, STATES, ETC., 1903, 1915, AND 1921.

State or Territory.	Estimated Private Wealth.					
	Aggregate Amount.			Per Head of Population.		
	1903 (Coghlan).	1915 (Knibbs).	1921 (Wickens).	1903.	1915.	1921.
	Million £.	Million £.	Million £.	£	£	£
New South Wales	368.8*a*	660.8	886.1	261*a*	350	421
Victoria	110.0	454.1	627.0	257	317	408
Queensland	119.5	209.6	271.4	232	303	356
South Australia	86.3*b*	134.0	181.9	240*b*	300	366
Western Australia	49.1	107.1	127.3	223	333	381
Tasmania	48.3	51.3	68.0	268	261	319
Northern Territory	(*b*)	2.0	3.5	(*b*)	450	889
Federal Capital Territory	(*a*)	0.6	0.7	(*a*)	236	267
Australia	982.0	1,619.5	2,165.9	252	325	397

(*a*) Particulars for Federal Capital Territory included with New South Wales.
(*b*) Particulars for Northern Territory included with South Australia.

In all instances the figures relate to the material private wealth existing in the several States and Territories, irrespective of the domicile of the owner.

3. **Estimated Value of Government and Municipal Property, 1915 and 1921.**—An estimate of the value of Government and Municipal property at any date cannot be readily obtained, but with the object of presenting a complete view of Australian wealth, a rough estimate has been prepared in respect of the years 1915 and 1921, the results of which are given hereunder :—

GOVERNMENT AND MUNICIPAL PROPERTY.—ESTIMATED VALUE, 1915 AND 1921.

Particulars.	1915.	1921.
	Million £.	Million £.
Commonwealth—		
Railways	6	11
Land, Buildings, and other Property	11	18
State—		
Railways and Tramways	202	240
Crown Lands	38	53
Buildings and other Property	100	121
Municipal—		
Roads and Streets	120	160
Other Property	40	54
Total	517	657

These figures indicate that the total for Government and Municipal property is about one-fourth of the aggregate wealth of Australia, public and private, a proportion which agrees approximately with estimates that have been made in the case of Great Britain.

As the estimates previously given, whether for public or private wealth, are in respect of the values of material objects, irrespective of ownership, the effect of public or private indebtedness does not enter into the question.

§ 11. Conspectus of Australian Life Assurance Legislation.

A conspectus of Australian Life Assurance Legislation appeared in Official Year Book No. 18, pp. 1041 to 1059, but considerations of space preclude its insertion in the present issue.

CHAPTER XXVII.

STATISTICAL ORGANIZATION AND SOURCES OF INFORMATION.

§ 1. General.

1. **Development of Australian Statistics.**—(i) *Crown Colony Blue Books.* The statistical organization of the Australian States owes its origin to the "Blue Books" which in the Crown Colony days were prepared annually for the information of the Colonial Office, London. These documents were intended rather for administrative purposes than as records of statistical data, but their use in this latter respect has in many cases been quite as important as their primary purpose.

The account of the growth and progress of an infant colony furnished by a series of these Blue Books is highly informative, and although some matters of great importance were left untouched, or treated insufficiently, the limited range of economic activities was usually fairly covered, and an interesting index of material development was furnished.

Apart from their scientific utility, these Blue Books served the purpose of a basis on which the later statistical publications were fashioned, and they thus furnished for the British Empire an element of uniformity in the matter of statistical compilation.

(ii) *Statistical Registers.* Following the advent of Responsible Government which was granted during the period 1851–60 to all the Australian States except Western Australia—and to that State in 1890—the "Blue Book" was succeeded by a publication which in all cases was known as the "Statistical Register." In many respects this was the old Blue Book in a new guise. The information contained was in most cases a summary of the more important data obtainable as by-products from the activities of the various administrative departments of the Government. Gradually, however, statistical consciousness emerged, and the necessity for special effort in the compilation of such data was realized. The most important of the early evidences of definite statistical effort was the taking of the population Censuses which in all the States were initiated under the Crown Colony regime. This for long furnished the sole examples of extensive governmental organization for a purely statistical purpose ; in practically all other cases the statistics were by-products. The growing need for quantitative data concerning the progress of the several young communities of Australia led to improvement in the method of statistical record, and gradually to the recognition of an officer of the public service whose principal duty was that of preparing and publishing such data. It was probably due to the circumstance that the office of the Registrar-General of Births, Deaths, and Marriages had usually been employed as head-quarters for the intermittent Censuses that this officer in many of the States was selected as the Statistician, and in some instances received that or a similar title in addition to his title of Registrar-General.

(iii) *Prominent State Statisticians.* Amongst the various holders of the position of Government Statistician, or its equivalent, three stand out prominently in respect of their efforts to place Australian Statistics on a satisfactory basis. The earliest of these was Mr. H. H. Hayter, who filled the position of Government Statist of Victoria from 1873 until his death in 1895. Under his control the "Victorian Year Book" and the Statistical Bureau were initiated, many marked improvements were effected in the collection and tabulation of statistical data, and a reputation for careful investigation and lucid interpretation was established. Under his guidance excellent statistical data for Australasia were compiled annually, and he was an untiring worker in the cause of statistical uniformity. His nosological index for the classification of causes of death was long a standard work in the field of Vital Statistics in Australia. The next in point of time of the three mentioned above was Mr. R. M. Johnston, who filled the position of Government Statistician in Tasmania from 1882 until his death in 1918. Like Mr. Hayter, he was a keen advocate of uniformity throughout Australia in the compilation of statistics, and gave great assistance at various statistical conferences, particularly in the matter of classification of data. He was a man of diversified attainments, and his influence on the development of statistical investigation in Australia was considerable. The third of the State statisticians indicated was Mr. T. A. Coghlan (later the Hon. Sir Timothy Coghlan, K.C.M.G., I.S.O.), who filled the position of Government Statistician in New South Wales from 1886 to 1905, when he resigned to take up other duties. Under his direction many improvements were effected in the statistical compilations of that State, and the Statistical Register issued during and since his time is one of the most complete statistical analyses available of any community. A Year Book entitled "The Wealth and Progress of New South Wales" was published by him, also a publication entitled "The Seven Colonies of Australia," which appeared at intervals of about two years. This latter is of some special interest as its general plan formed the groundwork of the present "Official Year Book of the Commonwealth of Australia." Apart from his individual efforts in the direction of statistical uniformity for Australia, Mr. Coghlan was also strongly in favour of the practice of holding periodical statistical conferences, and assisted at several of these in connexion with census and general statistics.

(iv) *Statistical Conferences.* To enable the statisticians of the several States to interchange ideas, and to ensure the attainment of results which would be capable of comparison and would be suitable for the ascertainment of aggregates for Australia, conferences were held from time to time in the several States from as early a date as 1861. There were in all six conferences prior to the formation of the Federal Bureau of Census and Statistics in 1906. These conferences took place respectively in 1861, 1875, 1890, 1900, 1902, and 1903, and in many cases were attended by a representative of New Zealand. By means of them a great improvement in the uniformity of statistical data was effected

(v) *Federal Bureau.* Under the provisions of the Commonwealth Constitution, section 51, sub-section (xi), power is conferred on the Federal Parliament "to make laws for the peace, order, and good government of the Commonwealth with respect to Census and Statistics." In compliance with this provision, the Census and Statistics Act 1905 was passed, and in 1906 the Federal Bureau of Census and Statistics was created. The first Federal Statistician was Mr. G. H. Knibbs (now Sir George H. Knibbs, K.B., etc.) who filled the position from 1906 until his appointment in 1921 to the position of Director of the Commonwealth Institute of Science and Industry. To the task of organizing the work of the new Bureau Mr. Knibbs brought a lengthy and varied experience in important branches of the public service in New South Wales, and in the formation of his staff he drew largely upon the staffs of existing State Statistical Offices. One of the earliest steps taken was that of holding in November and December, 1906, a conference with the State statisticians to define the relations between the several Bureaux and to arrange for the interchange of data. The conference was marked by great cordiality between the various representatives, and an extensive series of forms was approved for the supply of data by the States to the Commonwealth. In each case, the State Statistician became the representative in his own State of the Commonwealth Statistician for the purpose of carrying out the provisions of the Federal Act. Some of the outstanding features of the Bureau's activities during the period of control by Mr. Knibbs were as follows :—

(*a*) The initiation and annual publication of the Official Year-Book of the Commonwealth of Australia ;

(*b*) The annual publication of Statistical Bulletins dealing with the principal activities of the whole of Australia ;

(*c*) The quarterly (at one time monthly) publication of a Summary of Australian statistical data ;

(*d*) The formation of a Labour and Industrial Branch to record prices, wages, and kindred matters ;

(*e*) The taking of population censuses for all Australia in 1911 and 1921 ;

(*f*) The taking of a special War Census (including a Wealth Census) in 1915 ;

(*g*) The compilation and publication of a series of Life Tables for Australia and its component States, and of monetary tables based thereon.

The vacancy caused by the transfer of Mr. Knibbs was filled in 1922 by the appointment—as from 1st August in that year—of Mr. C. H. Wickens, who had previously filled the position of Supervisor of Census in the Bureau.

(vi) *Uniformity of Statistical Control.* At various dates since the creation of the Commonwealth, proposals have been made for the unification of statistical compilation in Australia. Under the provisions of the Federal Constitution the item "Census and Statistics" is not allocated exclusively to the Federal Parliament, but is one of those matters in connexion with which powers may be exercised concurrently by Federal and State Legislatures. In the matter of the Census, the States have ceased to function since the Commonwealth undertook the work, but the right of a State to take a Census at any time is not vitiated thereby. In the field of General Statistics, on the other hand, there are now seven separate bureaux operating. As, however, each State bureau is concerned solely with its own territory, and as in many matters the Commonwealth Bureau is largely interested in the presentation of the data for Australia as a whole, there is not a great deal of overlapping or duplication of effort. Such duplication does, however, exist to some extent, especially in the matter of publication, and at conferences of the State Premiers in 1906 and 1918 resolutions were passed in favour of combining Federal and State bureaux, but in each case the idea was subsequently abandoned. At a conference between Federal and State Ministers in May, 1923, the matter was again under consideration, and a resolution in favour of one statistical authority for Australia was passed, the consideration of details to be left to a conference of Commonwealth and State Statisticians. This Conference was held in October, 1923, and formulated a scheme for the transfer of such of the State Bureaux as the Governments concerned desired to hand over to the Commonwealth. The Tasmanian State Bureau was transferred in November 1924; and in some other cases the matter is still under consideration. On the 18th August, 1924, and succeeding days, a conference of the Government Statisticians of the Commonwealth of Australia, the Dominion of New Zealand, and the several Australian States was held in Adelaide to discuss arrangements for increasing the efficiency and uniformity of statistical compilation, and for diminishing the amount of duplication of effort still existing. The results attained were very satisfactory, and are likely to increase the value of the statistical data of the two Dominions.

(vii) *Present Organization.* The existing organization in respect of the collection, tabulation, etc., of statistical data as between the State and Federal Statistical Bureaux, and State and Federal Government Departments, is set forth in the accompanying conspectus.

PRESENT ORGANIZATION OF STATISTICAL COLLECTION, TABULATION, SUMMARY AND REVIEW.

A.—CLASSIFICATION ACCORDING TO SUBJECT.

Note.—C.S.=Commonwealth Statistician.
C.D.=Commonwealth Department (non-statistical).
S.S.=State Statistician.
S.D.=State Department (non-statistical).

Subject.	Collected by—	Tabulated by—	Australian results summarized and reviewed by—
I. Population—			
(i) Census	C.S.	C.S.	C.S.
(ii) Vital Statistics	S.D.	C.S. and S.S.	C.S.
(iii) Migration	C.S., C.D. and S.D.	C.S.	C.S.
II. Production—			
(i) Land Settlement	S.D.	S.D.	C.S.
(ii) Agriculture	S.S.(*a*)	S.S.	C.S.
(iii) Pastoral	S.S.(*a*)	S.S.	C.S.
(iv) Dairying	S.S.(*a*)	S.S.	C.S.

(*a*) State Police collect original individual returns from owners, occupiers, etc., without charge (except out-of-pocket expenses).

PRESENT ORGANIZATION OF STATISTICAL COLLECTION, TABULATION, SUMMARY AND REVIEW—*continued.*

A.—CLASSIFICATION ACCORDING TO SUBJECT—*continued.*

Subject.	Collected by—	Tabulated by—	Australian results summarized and reviewed by—
II. Production—*continued.*			
(v) Mineral	S.D.	S.D.	C.S.
(vi) Forestry	S.D.	S.D.	C.S.
(vii) Fisheries	S.D.	S.D.	C.S.
(viii) Water Conservation	S.D.	S.D.	C.S.
(ix) Manufacturing	S.S.(*a*)	S.S.	C.S.
III. Transport and Communication—			
(i) Railways—			
(*a*) Government (C'wealth)	C.D.	C.D.	C.S.
(*b*) Government (State)	S.D.	S.D.	C.S.
(*c*) Private	C.S.	C.S.	C.S.
(ii) Tramways	C.S.	C.S.	C.S.
(iii) Shipping	C.D.	C.S.	C.S.
(iv) Posts	C.D.	C.D.	C.S.
(v) Telegraphs	C.D.	C.D.	C.S.
(vi) Telephones	C.D.	C.D.	C.S.
(vii) Aircraft	C.S.	C.S.	C.S.
(viii) Motor Vehicles	S.D.	S.D.	C.S.
IV. Trade and Commerce—			
(i) Imports	C.D.	C.D.	C.S.
(ii) Exports	C.D.	C.D.	C.S.
(iii) Customs	C.D.	C.D.	C.S.
(iv) Excise	C.D.	C.D.	C.S.
V. Finance—			
(i) Commonwealth	C.D.	C.D.	C.S.
(ii) State	S.D.	S.D.	C.S.
(iii) Private—			
(*a*) Banking	C.S. and S.S.	C.S. and S.S.	C.S.
(*b*) Insurance	C.S. and S.S.	C.S. and S.S.	C.S.
VI. Social—			
(i) Education	S.D.	S.D.	C.S.
(ii) Hospitals	S.S.	S.S.	C.S.
(iii) Charities	S.S.	S.S.	C.S.
(iv) Judicial	S.S.	S.S.	C.S.
VII. Labour and Industrial—			
(i) Prices	C.S. and S.S.	C.S. and S.S.	C.S.
(ii) Wages	C.S. and S.D.	C.S. and S.D.	C.S.
(iii) Industrial Disputes	C.S. and S.D.	C.S. and S.D.	C.S.
(iv) Trade Unionism	C.S. and S.D.	C.S. and S.D.	C.S.
(v) Unemployment	C.S. and S.D.	C.S. and S.D.	C.S.
VIII. Local Government	S.S.	S.S.	C.S.
IX. Miscellaneous—			
(i) Electoral	C.D. and S.D	C.D. and S.D.	C.S.
(ii) Meteorological	C.D.	C.D.	C.D.

(*a*) State Police collect original individual returns from owners, occupiers, etc., without charge (except out-of-pocket expenses).

PRESENT ORGANIZATION OF STATISTICAL COLLECTION, TABULATION, SUMMARY, AND REVIEW—*continued.*

B.—Classification of Subjects According to Department Responsible for Collection.

Data collected by—			
Commonwealth Statistician.	Commonwealth Department (non-statistical).	State Statist.	State Department (non-statistical).
Census.	Migration (Sea).	Agriculture.	Vital Statistics.
Migration (Rail).	Government Railways (C'wealth).	Pastoral.	Land Settlement.
Railways (Private).	Shipping.	Dairying.	Mineral.
Tramways.	Posts.	Manufacturing.	Government Railways (State).
Aircraft.	Telegraphs.	Banking.	Motor Vehicles.
Banking.	Telephones.	Insurance.	Forestry.
Insurance.	Imports.	Hospitals.	Fisheries.
Prices.	Exports.	Charities.	Water Conservation.
Wages.	Customs.	Judicial.	Finance (State).
Industrial Disputes.	Excise.	Prices.	Education.
Trade Unionism.	Finance (C'wealth).	Local Government.	Wages.
Unemployment.	Electoral (C'wealth).		Industrial Disputes.
	Meteorological.		Trade Unionism.
			Unemployment.
			Electoral (State).

C.—Classification of Subjects according to Department Responsible for Initial Tabulation.

Commonwealth Statistician.	Commonwealth Department.	State Statist.	State Department.
Census.	Government Railways (C'wealth).	Vital Statistics.	Land Settlement.
Vital Statistics.	Posts.	Agriculture.	Mineral.
Migration (Rail and Sea).	Telegraphs.	Pastoral.	Government Railways (State).
Railways (Private).	Telephones.	Dairying.	Motor Vehicles.
Tramways.	Imports.	Manufacturing.	Forestry.
Shipping.	Exports.	Banking.	Fisheries.
Aircraft.	Customs.	Insurance.	Water Conservation.
Banking.	Excise.	Hospitals.	Finance (State).
Insurance.	Finance (C'wealth).	Charities.	Education.
Prices.	Electoral (C'wealth.)	Judicial.	Wages.
Wages.	Meteorological.	Prices.	Industrial Disputes.
Industrial Disputes.		Local Government.	Trade Unionism.
Trade Unionism.			Unemployment.
Unemployment.			Electoral (State).

D.—The Australian results are summarized and the statistics are reviewed by the Commonwealth Statistician in all the cases above except Meteorological Statistics which are dealt with entirely by the Commonwealth Meteorologist.

2. **Sources of Information.**—The foregoing conspectus gives in concise form the main sources from which general statistical data are obtained. It may be noted that such information is furnished in various ways —(*a*) Directly, in response to the Commonwealth Statistician's demand ; (*b*) by the State Statisticians who collect directly from individuals or through the medium of police officers or special collectors ; (*c*) by Commonwealth and

State Government Departments either in their Departmental Reports or in response to special inquiries (the Commonwealth Trade and Customs Department supplies returns of Trade, and of Customs and Excise); (*d*) by scientific and technical experts invited to contribute special articles for the Official Year Book.

In addition, information may be obtained through the State Statisticians acting in the capacity of duly constituted officers under the provisions of the Commonwealth Census and Statistics Act.

§ 2. Statistical Publications of Australia.

1. **General.**—The official statistical publications of Australia may be divided bibliographically into two main divisions, viz. :—(1) Commonwealth publications dealing both individually and collectively with the several States of the Commonwealth, and (2) State publications dealing with individual States only. Besides these there are many other reports, etc., issued regularly, which though not wholly statistical, necessarily contain a considerable amount of statistical information. The more important of these published to September, 1926, are indicated below.

2. **Commonwealth Publications.**—Commonwealth publications may be grouped under two heads, viz. :—(i) Publications issued by the Commonwealth Statistician, and (ii) Parliamentary and Departmental Reports and Papers.

(i) *Publications issued by the Commonwealth Statistician.* The following is a list of the principal statistical publications issued from the Commonwealth Bureau of Census and Statistics since its inauguration up to September, 1926 :—

Australian Life Tables, 1901–1910. *Australian Joint Life Tables*, 1901–1910.

Census (1911) Bulletins.

Census (1911) Results.—Vols. I., II., and III., with Appendix "Mathematical Theory of Population."

Census (1921) Results.—Bulletins, Nos. 1 to 26. Report, Parts I to XVI., forming Vol I., and Parts XVII. to XXIX., to form, with the Statistician's Report, Vol II.

Finance—Bulletins, 1907 to 1916–17 annually; 1917–18 and 1918–19 (one vol.); 1919–20 and 1920–21 (one vol.); 1921–22; 1922–23; 1923–24; 1924–25.

Labour and Industrial Statistics—Memoranda and Reports, various, to 1913. *Labour Report*, annually, 1913 to 1925.

Local Government in Australia—July, 1919.

Official Year Book of the Commonwealth of Australia—Annually, 1907 to present issue (1926).

Oversea Trade, annually, 1906 to 1924–25.

Pocket Compendium of Australian Statistics (formerly *Statistical Digest*), 1913, 1914, 1916, and 1918 to 1926 annually.

Population and Vital Statistics Bulletins—Reports, various. Commonwealth Demography, 1911 to 1925 annually.

Production—Bulletins, annually, 1906 to 1924–25.

Professional Papers—Various. A full list will be found in Official Year Book No. 13, p. 3.

Quarterly Summary of Australian Statistics—first issue, No. 70, December, 1917, replacing *Monthly Summary of Australian Statistics* (Bulletins 1 to 69), and incorporating data from earlier publications relating to Labour, Shipping, Trade, Vital Statistics, Oversea Migration, etc.

Social Insurance—Report to the Hon. the Minister of Trade and Customs, 1910.

Social Statistics—Bulletins, 1907 to 1915 annually, and 1918.

Superannuation for the Commonwealth Public Service—Report to the Hon. the Minister for Home Affairs, 1910.

Transport and Communication—Bulletins, 1906, 1908, to 1916 annually; 1919 to 1925 annually.

Wealth—The Private Wealth of Australia and its Growth as ascertained by various methods, together with a Report of the War Census in 1915.

(ii) *Commonwealth Parliamentary and Departmental Reports and Papers.* Lists of the principal official reports and other documents containing statistical information issued from the inauguration of the Commonwealth were given in Year Books up to No. 15, but limits of space preclude the incorporation of this information in the present volume.

3. **State Publications.**—The chief statistical publications of each State are set out hereunder. Limits of space preclude a further enumeration of the various Departmental Reports, statements of accounts, etc., issued by officials, boards, local government bodies, etc., in each State.

(*a*) New South Wales—Statistical Register (annual); Official Year Book of New South Wales (annual); Statesman's Year Book (annual); Vital Statistics (monthly and annual); Statistical Bulletin (monthly to December, 1919, thereafter quarterly).

(*b*) Victoria—Statistical Register (annual to 1916, then discontinued); Victorian Year Book (annual); Statistical Abstracts (quarterly to 1917).

(*c*) Queensland—Statistical Register (annual); Official Year Book, 1901; A.B.C. of Queensland Statistics (annual); Vital Statistics (annual and monthly).

(*d*) South Australia—Statistical Register (annual); Official Year Book, 1912 and 1913; Statesman's Pocket Year Book (annual).

(*e*) Western Australia—Statistical Register (annual); Statistical Abstracts (quarterly, previously issued monthly to July, 1917); Pocket Year Book of Western Australia (annual); Circular (monthly), containing Principal Statistics.

(*f*) Tasmania—Statistical Register (annual); Statesman's Pocket Year Book (annual); Statistical Summaries (annual); Vital Statistics and Migration (annual and monthly).

§ 3. Bibliography of Recent Works on Australia.

1. **General.**—In Official Year Book No. 13, a list of the principal general works dealing with Australia and Australian affairs, published from 1901 to 1920, will be found. Of the publications of the first eighteen years of the Commonwealth the more important are now repeated, with a fuller list of works published within the last six years.

Allen, Nellie B. Africa, Australia, and the Islands of the Pacific. Boston, 1924.
Andersson, G. Australien: Natur och Kultur: Studien och Minnen. Stockholm, 1922.
Armour, Rev. J. The Spell of the Inland: a Romance of Central Australia. Melbourne, 1923.
Atkinson, Meredith (Ed.). Australia: Economic and Political Studies, by Various Writers. Melbourne, 1920.
Australasian Association for the Advancement of Science. Biennial Reports of Proceedings.
Australia's Leading Industries Pty., Ltd. Australia's Leading Industries. Melbourne, 1925.
Basedow, Dr. Herbert. The Australian Aboriginal. Adelaide, 1925.
Bean, C. E. W. On the Wool Track. Sydney, 1925.
Bean, C. E. W. (Ed.). Official History of Australia in the War of 1914–1918 (in 12 vols.). Vol. I., Sydney, 1921. Vol. II., Sydney, 1924.
Bean, C. E. W., and Gullett, H. S. Official History of Australia in the War of 1914–18. Vol. XII, Sydney, 1923.
Bland, F. A. Shadows and Realities of Government, W.E.A. Series, Sydney, 1923.
Bolam, Anthony G. The Trans-Australian Wonderland. 3rd Edition. Melbourne, 1924.
Boyce, W. D. Australia and New Zealand illustrated. Chicago, 1922.
British Immigration League of Australia. Annual Reports.
Bryant, J. Great Events in Australian History. Sydney, 1925.
Bryce, Viscount. Modern Democracies. London, 1921.
Carpenter, F. G. Australia, New Zealand and Some Islands of the South Seas. New York, 1924.
Childe, V. G. How Labour Governs: a Study of Workers' Representation in Australia. London, 1923.
Coghlan, Sir T. A. Labour and Industry in Australia. London, 1918. 4 vols.
Collingridge, George. First Discovery of Australia and New Guinea. Sydney, 1906.
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APPENDIX.

[Recent information and returns which have come to hand since the various chapters were sent to press are given hereunder.]

CHAPTER I.

DISCOVERY, COLONIZATION, AND FEDERATION OF AUSTRALIA.

§ 9. Commonwealth Administration and Legislation.

2. Governors-General and Ministries.—

Minister for Home and Territories ..	HON. SIR THOMAS WILLIAM GLASGOW, K.C.B., C.M.G., D.S.O., V.D., (from 18/6/1926).
Minister for Markets and Migration ..	HON. THOMAS PATERSON (from 18/6/1926).
Vice-President of the Executive Council ..	RT. HON. GEORGE FOSTER PEARCE, P.C. (from 18/6/1926).
Honorary Ministers	HON. CHARLES WILLIAM CLANAN MARR, D.S.O., M.C., V.D. HON. THOMAS WILLIAM CRAWFORD.

3. STATE MINISTRIES.

VICTORIA (p. 36.)

Premier and Minister of Water Supply and Minister of Railways—HON. J. ALLAN.

Attorney-General and Solicitor-General—HON. F. W. EGGLESTON.

SOUTH AUSTRALIA (p. 37.)

Premier, Treasurer and Minister of Education—HON. L. L. HILL.

Commissioner of Public Works, Minister of Railways and Industry—HON. J. MCINNES.

CHAPTER III.

GENERAL GOVERNMENT.

§ 2. Parliaments and Elections.

4. Federal Referenda (p. 79)—*Industry and Commerce and Essential Services Referendum 1926*. On the 4th September, 1926, two proposals were submitted to the electors for the alteration of the Constitution in relation to the extension of legislative powers of the Commonwealth, in regard to (*a*) Industry and Commerce and (*b*) Essential Services. In each case the majority of the votes was not in favour of the proposed alteration. The following table shows the number of votes cast for and against each proposed law in the various States :—

COMMONWEALTH REFERENDUM, 1926.—RESULTS OF VOTING.

State.	Industry and Commerce.		Essential Services.	
	Votes in Favour.	Votes Not in Favour.	Votes in Favour.	Votes Not in Favour.
New South Wales	566,973	533,284	545,270	536,734
Victoria	310,261	546,138	296,548	537,560
Queensland	202,691	186,374	188,473	184,320
South Australia	78,983	190,396	81,966	179,740
Western Australia	46,469	112,185	39,566	113,222
Tasmania	41,711	51,278	43,679	46,217
Totals	1,247,088	1,619,655	1,195,502	1,597,793

In the Commonwealth as a whole there was a majority of votes against each of the proposed laws, namely, Industry and Commerce—372,567, Essential Services—402,291.

In four of the States, viz., Victoria, South Australia, Western Australia, and Tasmania, a majority of votes was recorded *Not in Favour* of each of the proposed laws, whilst in two States—New South Wales and Queensland—a majority of votes was recorded *In Favour* of each of the proposed laws, as shown by the following statements :—

State.	Industry and Commerce.		Essential Services.	
	Majority of Votes—		Majority of Votes—	
	In Favour of the Proposed Law.	Not in Favour of the Proposed Law.	In Favour of the Proposed Law.	Not in Favour of the Proposed Law.
Victoria	..	235,877	..	241,012
South Australia	..	111,413	..	97,774
Western Australia	..	65,716	..	73,656
Tasmania	..	9,567	..	2,538
New South Wales	33,689	..	8,536	..
Queensland	16,317	..	4,153	..
Total majority ..	..	372,567	..	402,291

The percentage of electors who voted on the former question was 88.08, and on the latter 85.83, although ballot papers were issued to 91.07 per cent. of the voters enrolled.

7. **The Parliament of Queensland, p. 80.**—The elections for the 23rd Parliament were held on 8th May, 1926, when the voting, &c. was as follows :—

Electors enrolled in six uncontested electorates ..	Males	20,602
	Females	11,602
	Total	32,204
Electors enrolled in 66 contested electorates ..	Males	236,164
	Females	215,844
	Total	452,008
Electors who voted	Males	209,139
	Females	191,916
	Total	401,055
Percentage of electors who voted in contested electorates	Males	88.56
	Females	88.91
	Total	88.73

CHAPTER VI.

OVERSEA TRADE.

§ 4. Oversea Trade.

1. **Total Oversea Trade, p. 200.**—The following particulars have been compiled from preliminary returns relating to the Oversea Trade of Australia during the year 1925–26 :—

OVERSEA TRADE.—AUSTRALIA.

Period.	Recorded Value.			Value per Inhabitant.			Percentage of Exports on Imports.
	Imports.	Exports.	Total.	Imports.	Exports.	Total.	
	£1,000.	£1,000.	£1,000.	£ s. d.	£ s. d.	£ s. d.	%
1925–26	151,558	148,419	299,977	25 5 10	24 15 5	50 1 3	97.9

CHAPTER VIII.

FINANCE.

A. COMMONWEALTH FINANCE.

§ 2. Consolidated Revenue Fund.

Division II.—Revenue.

1. **Total, p. 330.**—Revenue for year 1925–26 amounted to £70,203,572.

2. **Revenue per Head, p. 331.**—The revenue per head of population for 1925–26 was £11 14s. 4d.

Division III.—Expenditure.

2. **Total Expenditure, p. 337.**—For the year 1925–26 the total expenditure was £75,109,437, and the expenditure per head of population £12 10s. 9d.

§ 4. Commonwealth Loan Funds and Public Debt.

7. **Commonwealth Public Debt.**—(ii) *Place of Flotation*, p. 350. At the 30th June, 1926, the debt stood as follows :—

	£
Payable in London	155,883,499
Payable in New York	15,411,487
Payable in Australia	276,083,523
Value of Transferred Properties	11,065,129
Total	458,443,638

(iv) *Amount of Interest Payable*, p. 351. At the 30th June, 1926, the interest payable on the debt amounted to £23,827,571, of which £7,949,760 was payable in London, £770,575 in New York and £15,107,236 in Australia.

B. STATE FINANCE.

§ 1. General.

3. Inter-relation of Commonwealth and State Finance, (p. 361.)

A satisfactory conclusion was not reached at the Conference of Commonwealth and State Ministers held in May, 1926. The Commonwealth Government, however, proposes to legislate for the withdrawal of the present capitation payments and for the discontinuance of Commonwealth taxes on land, entertainments, estate duties, and portion of the income tax, thus enabling the State Governments to recoup themselves for the loss of the capitation payments by raising extra taxation in the fields surrendered by the Commonwealth.

The Commonwealth Government proposes to bring the scheme into operation during 1926–27, thus giving the State Governments a year in which to formulate plans for raising the necessary revenue.

CHAPTER XVII.

AGRICULTURAL PRODUCTION.

§ 4. Wheat.

7. Voluntary Wheat Pools, p. 641.—Voluntary wheat pools again operated in the States of New South Wales, Victoria, South Australia and Western Australia during the 1924–25 season. The system adopted is a co-operative one, controlled by committees appointed by the growers, the whole of the proceeds, less administrative expenses, being distributed amongst contributors of wheat to the pool. The marketing of wheat in Queensland was conducted on the compulsory basis by the State Wheat Board, consisting of five representatives of the growers with a Government appointee as Chairman. The quantities of wheat received by the different pools were as follows :—

WHEAT RECEIVED BY VOLUNTARY POOLS, 1925–26.

Particulars.	Unit.	N.S.W.	Victoria.	S. Aust.	W. Aust.
Wheat received ..	Bushel	740,600	3,618,026	5,395,733	6,000,000

The requisite financial accommodation was furnished by the Commonwealth and Associated Banks supported by guarantees by the various State Governments. In Western Australia funds were again made available by the Co-operative Wholesale Society Ltd. of Great Britain. Initial advances of from 3s. 3d. to 4s. per bushel were made available to growers on the delivery of thei wheat at country stations, and further advances have been made in all the States, the average amount received per bushel to August, 1926, ranging from 5s. 8d. to 5s. 11d., less rail freight. The disposal of the remaining stocks will make available further small sums for distribution among the wheat-growers.

In Queensland the Commonwealth and Associated Banks provide the financial assistance necessary to make advances on wheat delivered, the State Government guaranteeing the Wheat Board's accounts with the banks. At the 30th June, 1926, 1,799,263 bushels of wheat had been delivered to the pool, of which 1,669,151 bushels had been disposed of, leaving a balance of 130,112 bushels on hand. Advances amounting to 5s. per bushel for milling wheat and 4s. per bushel for feed wheat were paid, while a further advance of 10d. per bushel was declared and made payable on 7th July, 1926. It is estimated that a further final advance of approximately 5d. per bushel will be made on the realization of existing stocks.

CHAPTER XXI.

MINERAL INDUSTRY.

§ 1. The Mineral Wealth of Australia.

3. **Value of Production during 1925, p. 720.**—The following table gives the value of Australian mineral production for the year 1925 :—

MINERAL PRODUCTION.—VALUE, 1925.

Minerals.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
	£	£	£	£	£	£	£	£
Gold ..	82,499	200,901	197,120	3,534	1,874,318	14,969	1,938	2,375,279
Silver and Lead	5,320,976	291	240,684	1,655	114,960	302,961	..	5,981,527
Copper ..	30,215	..	254,074	35,878	..	436,661	..	756,828
Iron ..	525,415	..	..	674,649	..	..	..	1,200,064
Tin.. ..	250,944	11,592	161,500	..	15,392	297,515	15,966	752,909
Zinc ..	1,022,016	..	2,350	..	..	110,691	..	1,135,057
Coal ..	9,302,515	762,521	1,042,816	..	363,203	70,424	..	11,541,479
Other ..	119,042	25,401	118,774	312,582	26,014	244,651	3,467	849,931
Total ..	16,653,622	1,000,706	2,017,318	1,028,298	2,393,887	1,477,872	21,371	24,593,074

CHAPTER XXIV.

POPULATION.

§ 3. Distribution and Fluctuation of Population.

1. **Present Number, p. 852.**—The estimated population at the 30th June, 1926, was 6,043,924, distributed as follows :—

AUSTRALIA.—ESTIMATED POPULATION, 30th JUNE, 1926.

States and Territories.	Males.	Females.	Persons.
New South Wales	1,180,663	1,137,077	2,317,740
Victoria	842,892	851,587	1,694,479
Queensland	464,497	414,899	879,396
South Australia	288,195	270.283	558,478
Western Australia	201,076	174,082	375,158
Tasmania	104,115	105,263	209,378
Northern Territory	2,634	1,139	3,773
Federal Capital Territory	3,570	1,952	5,522
Total, Australia	3,087,642	2,956,282	6,043,924

The corresponding figures for Australia for the year ended 30th June, 1925, were 3,027,990 males and 2,901,298 females, or a total of 5,929,288 persons. There was thus a total increase during the year ended 30th June, 1926, of 114,636, made up of 59,652 males and 54,984 females.

GENERAL INDEX.

[Note.—This index is followed by a special index of maps, graphs, and diagrams, also an index relating to special articles, etc., in previous issues of the Official Year Book.]

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